

Aren0054.ST25.txt  
SEQUENCE LISTING

<110> Behan, Dominic P.  
Lehmann-Bruinsma, Karin  
Chalmers, Derek T.  
Lowitz, Kevin P.  
Lin, I-Lin  
Dang, Huong T.  
Chen, Ruoping  
Liaw, Chen W.

<120> Non-Endogenous Constititively Activated Human G Protein Coupled Receptors

<130> AREN-0054

<140> 09/416,760

<141> 1999-10-12

<150> 09/170,496

<151> 1998-10-13

<150> 60/110,060

<151> 1998-11-27

<150> 60/120,416

<151> 1999-02-16

<150> 60/121,852

<151> 1999-02-26

<150> 60/109,213

<151> 1998-11-20

<150> 60/123,944

<151> 1999-03-12

<150> 60/123,945

<151> 1999-03-12

<150> 60/123,948

<151> 1999-03-12

<150> 60/123,951

<151> 1999-03-12

<150> 60/123,946

<151> 1999-03-12

<150> 60/123,949

<151> 1999-03-12

<150> 60/152,524

<151> 1999-09-03

<150> 60/151,114

<151> 1999-08-27

<150> 60/108,029

<151> 1998-11-12

<150> 60/136,436

<151> 1999-05-28

<150> 60/136,439

<151> 1999-05-28

<150> 60/136,567  
<151> 1999-05-28

<150> 60/137,127  
<151> 1999-05-28

<150> 60/137,131  
<151> 1999-05-28

<150> 60/141,448  
<151> 1999-06-29

<150> 60/136,437  
<151> 1999-05-28

<150> 60/156,555  
<151> 1999-09-29

<150> 60/156,634  
<151> 1999-09-29

<150> 60/156,653  
<151> 1999-09-29

<150> 60/157,280  
<151> 1999-10-01

<150> 60/157,294  
<151> 1999-10-01

<150> 60/157,281  
<151> 1999-10-01

<150> 60/157,282  
<151> 1999-10-01

<150> 60/156,633  
<151> 1999-09-29

<160> 146

<170> PatentIn version 3.0

<210> 1  
<211> 1260  
<212> DNA  
<213> Homo sapiens

<400> 1  
atggtcttct cggcagtgtt gactgcggtc cataccggga catccaacac aacatttgtc 60  
gtgtatgaaa acacctacat gaatattaca ctccctccac cattccagca tectgacctc 120  
agtccattgc ttagatatag ttttgaaacc atggctccca ctggtttgag ttccttgacc 180  
gtgaatagta cagctgtgcc cacaacacca gcagcattta agagcctaaa cttgcctctt 240  
cagatcacc cttctgctat aatgatattc attctgtttg tgtcttttct tgggaacttg 300  
gttgtttgcc tcatggttta ccaaaaagct gccatgaggt ctgcaattaa catcctcctt 360  
gccagcctag cttttgcaga catgttgctt gcagtgtgta acatgccctt tgccttggtg 420  
actattctta ctaccgatg gatttttggg aaattcttct gtagggatc tgctatgttt 480

## Aren0054.ST25.txt

```

ttctgggttat ttgtgataga aggagtagcc atcctgctca tcattagcat agataggttc 540
cttattatag tccagaggca ggataagcta aacccatata gagctaaggt tctgattgca 600
gtttcttggg caacttcctt ttgtgtagct ttctcttag ccgtaggaaa ccccgacctg 660
cagatacctt cccgagctcc ccagtgtgtg tttgggtaca caaccaatcc aggctaccag 720
gcttatgtga ttttgatttc tctcatttct ttcttcatac ccttctggt aatactgtac 780
tcatttatgg gcatactcaa cacccttcgg cacaatgcct tgaggatcca tagctaccct 840
gaaggtatat gcctcagcca ggccagcaaa ctgggtctca tgagtctgca gagaccttc 900
cagatgagca ttgacatggg ctttaaaaca cgtgccttca ccactatctt gattctcttt 960
gctgtcttca ttgtctgctg ggccccattc accacttaca gccttggtggc aacattcagt 1020
aagcactttt actatcagca caactttttt gagattagca cctggctact gtggctctgc 1080
tacctcaagt ctgcattgaa tccgctgac tactactgga ggattaagaa attccatgat 1140
gcttgcttg acatgatgcc taagtccttc aagtttttgc cgcagctccc tggtcacaca 1200
aagcgacgga tacgtcctag tgctgtctat gtgtgtggg aacatcggac ggtggtgtga 1260

```

```

<210> 2
<211> 419
<212> PRT
<213> Homo sapiens

```

```

<400> 2

```

```

Met Val Phe Ser Ala Val Leu Thr Ala Phe His Thr Gly Thr Ser Asn
1          5          10          15
Thr Thr Phe Val Val Tyr Glu Asn Thr Tyr Met Asn Ile Thr Leu Pro
          20          25          30
Pro Pro Phe Gln His Pro Asp Leu Ser Pro Leu Leu Arg Tyr Ser Phe
          35          40          45
Glu Thr Met Ala Pro Thr Gly Leu Ser Ser Leu Thr Val Asn Ser Thr
          50          55          60
Ala Val Pro Thr Thr Pro Ala Ala Phe Lys Ser Leu Asn Leu Pro Leu
65          70          75          80
Gln Ile Thr Leu Ser Ala Ile Met Ile Phe Ile Leu Phe Val Ser Phe
          85          90          95
Leu Gly Asn Leu Val Val Cys Leu Met Val Tyr Gln Lys Ala Ala Met
          100          105          110
Arg Ser Ala Ile Asn Ile Leu Leu Ala Ser Leu Ala Phe Ala Asp Met
          115          120          125
Leu Leu Ala Val Leu Asn Met Pro Phe Ala Leu Val Thr Ile Leu Thr
          130          135          140
Thr Arg Trp Ile Phe Gly Lys Phe Phe Cys Arg Val Ser Ala Met Phe
145          150          155          160

```

Aren0054.ST25.txt

Phe Trp Leu Phe Val Ile Glu Gly Val Ala Ile Leu Leu Ile Ile Ser  
165 170 175  
Ile Asp Arg Phe Leu Ile Ile Val Gln Arg Gln Asp Lys Leu Asn Pro  
180 185 190  
Tyr Arg Ala Lys Val Leu Ile Ala Val Ser Trp Ala Thr Ser Phe Cys  
195 200 205  
Val Ala Phe Pro Leu Ala Val Gly Asn Pro Asp Leu Gln Ile Pro Ser  
210 215 220  
Arg Ala Pro Gln Cys Val Phe Gly Tyr Thr Thr Asn Pro Gly Tyr Gln  
225 230 235 240  
Ala Tyr Val Ile Leu Ile Ser Leu Ile Ser Phe Phe Ile Pro Phe Leu  
245 250 255  
Val Ile Leu Tyr Ser Phe Met Gly Ile Leu Asn Thr Leu Arg His Asn  
260 265 270  
Ala Leu Arg Ile His Ser Tyr Pro Glu Gly Ile Cys Leu Ser Gln Ala  
275 280 285  
Ser Lys Leu Gly Leu Met Ser Leu Gln Arg Pro Phe Gln Met Ser Ile  
290 295 300  
Asp Met Gly Phe Lys Thr Arg Ala Phe Thr Thr Ile Leu Ile Leu Phe  
305 310 315 320  
Ala Val Phe Ile Val Cys Trp Ala Pro Phe Thr Thr Tyr Ser Leu Val  
325 330 335  
Ala Thr Phe Ser Lys His Phe Tyr Tyr Gln His Asn Phe Phe Glu Ile  
340 345 350  
Ser Thr Trp Leu Leu Trp Leu Cys Tyr Leu Lys Ser Ala Leu Asn Pro  
355 360 365  
Leu Ile Tyr Tyr Trp Arg Ile Lys Lys Phe His Asp Ala Cys Leu Asp  
370 375 380  
Met Met Pro Lys Ser Phe Lys Phe Leu Pro Gln Leu Pro Gly His Thr  
385 390 395 400  
Lys Arg Arg Ile Arg Pro Ser Ala Val Tyr Val Cys Gly Glu His Arg  
405 410 415  
Thr Val Val

<210> 3  
<211> 1119  
<212> DNA  
<213> Homo sapiens

<400> 3  
atgttagcca acagctcctc aaccaacagt tctgttctcc cgtgtcctga ctaccgacct 60  
accacccgcc tgcacttggg ggtctacagc ttgggtgctgg ctgccgggct cccctcaac 120  
gcgctagccc tctgggtctt cctgcgcgcg ctgcgcgtgc actcgggtgg gagcgtgtac 180  
atgtgtaacc tggcggccag cgacctgctc ttcacctct cgctgcccg tctgtctctcc 240

## Aren0054.ST25.txt

```

tactacgcac tgcaccactg gcccttcccc gacctcctgt gccagacgac gggcgccatc 300
ttccagatga acatgtacgg cagctgcac ttctgatgc tcatcaacgt ggaccgctac 360
gccgccatcg tgcacccgct ggcactgcgc cacctgcggc ggccccgctt ggcgggctg 420
ctctgcctgg gcgtgtgggc gctcatctcg gtgtttgcg tgcgcgcgc cgcgtgcac 480
agggcctcgc gttgccgcta ccgggacctc gaggtgcgcc tatgcttga gagcttcagc 540
gacgagctgt ggaaaggcag gctgctgccc ctctgctgc tggccgaggc gctgggcttc 600
ctgctgcccc tggcgggcgt ggtctactcg tcgggcccag tcttctggac gctggcgcg 660
cccagcgcca cgcagagcca gcggcgcgag aagaccgtgc gcctcctgct ggctaacctc 720
gtcatcttcc tgctgtgctt cgtgccctac aacagcacgc tggcggtcta cgggctgctg 780
cggagcaagc tggtgggcgc cagcgtgcct gcccgcgatc gcgtgcgcgg ggtgctgatg 840
gtgatggtgc tgctggccgg cgccaactgc gtgctggacc cgctggtgta ctactttagc 900
gccgagggct tccgcaacac cctgcgcggc ctgggcactc cgcaccgggc caggacctcg 960
gccaccaacg ggacgcgggc ggcgctcgcg caatccgaaa ggtccgccgt caccaccgac 1020
gccaccaggc cggatgccgc cagtcaggcg ctgctccgac cctccgactc ccactctctg 1080
tcttccttca cacagtgtcc ccaggattcc gccctctga 1119

```

```

<210> 4
<211> 372
<212> PRT
<213> Homo sapiens

```

```
<400> 4
```

```

Met Leu Ala Asn Ser Ser Ser Thr Asn Ser Ser Val Leu Pro Cys Pro
1          5          10          15
Asp Tyr Arg Pro Thr His Arg Leu His Leu Val Val Tyr Ser Leu Val
20          25          30
Leu Ala Ala Gly Leu Pro Leu Asn Ala Leu Ala Leu Trp Val Phe Leu
35          40          45
Arg Ala Leu Arg Val His Ser Val Val Ser Val Tyr Met Cys Asn Leu
50          55          60
Ala Ala Ser Asp Leu Leu Phe Thr Leu Ser Leu Pro Val Arg Leu Ser
65          70          75          80
Tyr Tyr Ala Leu His His Trp Pro Phe Pro Asp Leu Leu Cys Gln Thr
85          90          95
Thr Gly Ala Ile Phe Gln Met Asn Met Tyr Gly Ser Cys Ile Phe Leu
100         105         110
Met Leu Ile Asn Val Asp Arg Tyr Ala Ala Ile Val His Pro Leu Arg
115         120         125
Leu Arg His Leu Arg Arg Pro Arg Val Ala Arg Leu Leu Cys Leu Gly
130         135         140

```

Aren0054.ST25.txt

Val Trp Ala Leu Ile Leu Val Phe Ala Val Pro Ala Ala Arg Val His  
145 150 155 160

Arg Pro Ser Arg Cys Arg Tyr Arg Asp Leu Glu Val Arg Leu Cys Phe  
165 170 175

Glu Ser Phe Ser Asp Glu Leu Trp Lys Gly Arg Leu Leu Pro Leu Val  
180 185 190

Leu Leu Ala Glu Ala Leu Gly Phe Leu Leu Pro Leu Ala Ala Val Val  
195 200 205

Tyr Ser Ser Gly Arg Val Phe Trp Thr Leu Ala Arg Pro Asp Ala Thr  
210 215 220

Gln Ser Gln Arg Arg Arg Lys Thr Val Arg Leu Leu Leu Ala Asn Leu  
225 230 235 240

Val Ile Phe Leu Leu Cys Phe Val Pro Tyr Asn Ser Thr Leu Ala Val  
245 250 255

Tyr Gly Leu Leu Arg Ser Lys Leu Val Ala Ala Ser Val Pro Ala Arg  
260 265 270

Asp Arg Val Arg Gly Val Leu Met Val Met Val Leu Leu Ala Gly Ala  
275 280 285

Asn Cys Val Leu Asp Pro Leu Val Tyr Tyr Phe Ser Ala Glu Gly Phe  
290 295 300

Arg Asn Thr Leu Arg Gly Leu Gly Thr Pro His Arg Ala Arg Thr Ser  
305 310 315 320

Ala Thr Asn Gly Thr Arg Ala Ala Leu Ala Gln Ser Glu Arg Ser Ala  
325 330 335

Val Thr Thr Asp Ala Thr Arg Pro Asp Ala Ala Ser Gln Gly Leu Leu  
340 345 350

Arg Pro Ser Asp Ser His Ser Leu Ser Ser Phe Thr Gln Cys Pro Gln  
355 360 365

Asp Ser Ala Leu  
370

<210> 5  
<211> 1107  
<212> DNA  
<213> Homo sapiens

<400> 5  
atggccaact ccacagggct gaacgcctca gaagtcgcag gctcggtggg gttgatcctg 60  
gcagctgtcg tggaggtggg ggcactgctg ggcaacggcg cgctgctggt cgtggtgctg 120  
cgcaagccgg gactgcgcga cgcgctctac ctggcgacc tgtgcgtcgt ggacctgctg 180  
gcggccgcct ccatcatgcc gctgggcctg ctggccgcac cgccgcccg gctggggccgc 240  
gtgcgcctgg gcccgcgcgc atgccgcgc gctcgcttcc tctccgcgc tctgctgcgc 300  
gctgcacgc tcggggtggc cgcacttggc ctggcacgct accgcctcat cgtgcaccgc 360  
ctgcggccag gctgcgggc gccgcctgtg ctgctgctca ccgccgtgtg ggccgcggcg 420

## Aren0054.ST25.txt

```

ggactgctgg gcgcgtctc cctgctcggc ccgcccgcg caccgcccc tgcctctgct 480
cgctgctcgg tcctggctgg gggcctcggg cccctccggc cgctctgggc cctgctggcc 540
ttcgcgctgc ccgcctcct gctgctcggc gcctacggcg gcatcttctg ggtggcgctg 600
cgcgctgccc tgaggcccc acggccggcg cgcgggtccc gactccgctc ggactctctg 660
gatagccgcc ttccatctt gccgcgctc cggcctcgcc tgcccgggg caaggcggcc 720
ctggccccag cgctggcctg gggccaattt gcagcctgct ggctgcctta tggctgcgcg 780
tgcttgggcg ccgcagcgcg ggccgcggaa gccgaagcgg ctgtcacctg ggtgcctac 840
tcggccttcg cggctcacc cttctgtac gggctgctgc agcgcccgt gcgcttgga 900
ctggggcgcc tctctcgcc tgcactgcct ggacctgtgc gggcctgcac tccgcaagcc 960
tggcaccgcg gggcactctt gcaatgcctc cagagacccc cagagggccc tgccgtaggc 1020
ccttctgagg ctccagaaca gaccccgag ttggcaggag ggcggagccc cgcataccag 1080
gggccacctg agagtctct ctctga 1107

```

```

<210> 6
<211> 368
<212> PRT
<213> Homo sapiens

```

```

<400> 6

```

```

Met Ala Asn Ser Thr Gly Leu Asn Ala Ser Glu Val Ala Gly Ser Leu
1          5          10          15
Gly Leu Ile Leu Ala Ala Val Val Glu Val Gly Ala Leu Leu Gly Asn
20          25          30
Gly Ala Leu Leu Val Val Val Leu Arg Thr Pro Gly Leu Arg Asp Ala
35          40          45
Leu Tyr Leu Ala His Leu Cys Val Val Asp Leu Leu Ala Ala Ala Ser
50          55          60
Ile Met Pro Leu Gly Leu Leu Ala Ala Pro Pro Pro Gly Leu Gly Arg
65          70          75          80
Val Arg Leu Gly Pro Ala Pro Cys Arg Ala Ala Arg Phe Leu Ser Ala
85          90          95
Ala Leu Leu Pro Ala Cys Thr Leu Gly Val Ala Ala Leu Gly Leu Ala
100         105         110
Arg Tyr Arg Leu Ile Val His Pro Leu Arg Pro Gly Ser Arg Pro Pro
115         120         125
Pro Val Leu Val Leu Thr Ala Val Trp Ala Ala Ala Gly Leu Leu Gly
130         135         140
Ala Leu Ser Leu Leu Gly Pro Pro Pro Ala Pro Pro Pro Ala Pro Ala
145         150         155         160
Arg Cys Ser Val Leu Ala Gly Gly Leu Gly Pro Phe Arg Pro Leu Trp
165         170         175

```

## Aren0054.ST25.txt

Ala Leu Leu Ala Phe Ala Leu Pro Ala Leu Leu Leu Leu Gly Ala Tyr  
 180 185 190

Gly Gly Ile Phe Val Val Ala Arg Arg Ala Ala Leu Arg Pro Pro Arg  
 195 200 205

Pro Ala Arg Gly Ser Arg Leu Arg Ser Asp Ser Leu Asp Ser Arg Leu  
 210 215 220

Ser Ile Leu Pro Pro Leu Arg Pro Arg Leu Pro Gly Gly Lys Ala Ala  
 225 230 235 240

Leu Ala Pro Ala Leu Ala Val Gly Gln Phe Ala Ala Cys Trp Leu Pro  
 245 250 255

Tyr Gly Cys Ala Cys Leu Ala Pro Ala Ala Arg Ala Ala Glu Ala Glu  
 260 265 270

Ala Ala Val Thr Trp Val Ala Tyr Ser Ala Phe Ala Ala His Pro Phe  
 275 280 285

Leu Tyr Gly Leu Leu Gln Arg Pro Val Arg Leu Ala Leu Gly Arg Leu  
 290 295 300

Ser Arg Arg Ala Leu Pro Gly Pro Val Arg Ala Cys Thr Pro Gln Ala  
 305 310 315 320

Trp His Pro Arg Ala Leu Leu Gln Cys Leu Gln Arg Pro Pro Glu Gly  
 325 330 335

Pro Ala Val Gly Pro Ser Glu Ala Pro Glu Gln Thr Pro Glu Leu Ala  
 340 345 350

Gly Gly Arg Ser Pro Ala Tyr Gln Gly Pro Pro Glu Ser Ser Leu Ser  
 355 360 365

<210> 7

<211> 1008

<212> DNA

<213> Homo sapiens

<400> 7

atggaatcat ctttctcatt tggagtgatc cttgctgtcc tggcctccct catcattgct 60

actaacacac tagtggctgt ggctgtgctg ctgttgatcc acaagaatga tgggtgtcagt 120

ctctgcttca ccttgaatct ggctgtggct gacaccttga ttggtgtggc catctctggc 180

ctactcacag accagctctc cagcccttct cggccacac agaagaccct gtgcagcctg 240

cggatggcat ttgtcacttc ctccgcagct gcctctgtcc tcacggtcac gctgatcacc 300

tttgacaggt accttgccat caagcagccc ttccgctact tgaagatcat gagtgggttc 360

gtggccgggg cctgcattgc cgggctgtgg ttagtgtctt acctcattgg cttcctccca 420

ctcggaatcc ccatgttcca gcagactgcc tacaaagggc agtgcagctt ctttctgtga 480

tttcaccctc acttcgtgct gaccctctcc tgcgttggct tcttcccagc catgctcctc 540

tttgtcttct tctactgoga catgctcaag attgcctcca tgcacagcca gcagattcga 600

aagatggaac atgcaggagc catggctgga gggttatcgat cccacggac tcccagcgac 660

ttcaaagctc tccgtactgt gtctgttctc attgggagct ttgctctatc ctggaccccc 720



## Aren0054.ST25.txt

```

ttccttatca ctggcattgt gcagggtggcc tgccaggagt gtcacctcta cctagtgtg 780
gaacgggtacc tgtggctgct cggcgtgggc aactccctgc tcaaccact catctatgcc 840
tattggcaga aggaggtgcg actgcagctc taccacatgg ccctaggagt gaagaaggtg 900
ctcacctcat tctctctctt tctctcggcc aggaattgtg gccagagag gccagggaa 960
agttcctgtc acatcgtcac tatctccagc tcagagtttg atggctaa 1008

```

```

<210> 8
<211> 335
<212> PRT
<213> Homo sapiens

```

```
<400> 8
```

```

Met Glu Ser Ser Phe Ser Phe Gly Val Ile Leu Ala Val Leu Ala Ser
1          5          10          15
Leu Ile Ile Ala Thr Asn Thr Leu Val Ala Val Ala Val Leu Leu Leu
          20          25          30
Ile His Lys Asn Asp Gly Val Ser Leu Cys Phe Thr Leu Asn Leu Ala
          35          40          45
Val Ala Asp Thr Leu Ile Gly Val Ala Ile Ser Gly Leu Leu Thr Asp
          50          55          60
Gln Leu Ser Ser Pro Ser Arg Pro Thr Gln Lys Thr Leu Cys Ser Leu
65          70          75          80
Arg Met Ala Phe Val Thr Ser Ser Ala Ala Ala Ser Val Leu Thr Val
          85          90          95
Met Leu Ile Thr Phe Asp Arg Tyr Leu Ala Ile Lys Gln Pro Phe Arg
          100          105          110
Tyr Leu Lys Ile Met Ser Gly Phe Val Ala Gly Ala Cys Ile Ala Gly
          115          120          125
Leu Trp Leu Val Ser Tyr Leu Ile Gly Phe Leu Pro Leu Gly Ile Pro
          130          135          140
Met Phe Gln Gln Thr Ala Tyr Lys Gly Gln Cys Ser Phe Phe Ala Val
145          150          155          160
Phe His Pro His Phe Val Leu Thr Leu Ser Cys Val Gly Phe Phe Pro
          165          170          175
Ala Met Leu Leu Phe Val Phe Phe Tyr Cys Asp Met Leu Lys Ile Ala
          180          185          190
Ser Met His Ser Gln Gln Ile Arg Lys Met Glu His Ala Gly Ala Met
          195          200          205
Ala Gly Gly Tyr Arg Ser Pro Arg Thr Pro Ser Asp Phe Lys Ala Leu
          210          215          220
Arg Thr Val Ser Val Leu Ile Gly Ser Phe Ala Leu Ser Trp Thr Pro
225          230          235          240
Phe Leu Ile Thr Gly Ile Val Gln Val Ala Cys Gln Glu Cys His Leu

```

245

250

255

Tyr Leu Val Leu Glu Arg Tyr Leu Trp Leu Leu Gly Val Gly Asn Ser  
260 265 270

Leu Leu Asn Pro Leu Ile Tyr Ala Tyr Trp Gln Lys Glu Val Arg Leu  
275 280 285

Gln Leu Tyr His Met Ala Leu Gly Val Lys Lys Val Leu Thr Ser Phe  
290 295 300

Leu Leu Phe Leu Ser Ala Arg Asn Cys Gly Pro Glu Arg Pro Arg Glu  
305 310 315 320

Ser Ser Cys His Ile Val Thr Ile Ser Ser Ser Glu Phe Asp Gly  
325 330 335

&lt;210&gt; 9

&lt;211&gt; 1413

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 9

atggacacta ccatggaagc tgacctgggt gccactggcc acaggccccg cacagagctt 60  
gatgatgagg actcctaccc ccaaggtggc tgggacacgg tcttcttggt ggccctgctg 120  
ctccttgggc tgccagccaa tgggttgatg gcgtggctgg ccggctccca ggcccgcat 180  
ggagctggca cgcgtctggc gctgctctctg ctcagcctgg ccctctctga cttcttggtc 240  
ctggcagcag cgcccttcca gatectagag atccggcatg ggggacactg gccgctgggg 300  
acagctgect gccgcttcta ctacttcta tggggcgtgt cctactctc cggcctcttc 360  
ctgctggccg ccctcagcct cgaccgctgc ctgctggcgc tgtgccaca ctggtaccct 420  
gggacccgcc cagtccgcct gccctctgg gtctgcgcg gtgtctgggt gctggccaca 480  
ctcttcagcg tgccctggct ggtcttcccc gaggtgcgc tctggtggta cgacctggtc 540  
atctgcctgg acttctggga cagcgaggag ctgtcgtgta ggatgctgga ggtcctgggg 600  
ggcttctctc ctttctctct gctgctcgtc tgccacgtgc tcacccaggc cacagcctgt 660  
cgcacctgcc accgccaaca gcagcccga gcctgccggg gcttcgcccg tgtggccagg 720  
accattctgt cagcctatgt ggtcctgagg ctgccctacc agctggccca gctgctctac 780  
ctggccttcc tgtgggacgt ctactctggc tacctgctct gggaggccct ggtctactcc 840  
gactacctga tcctactcaa cagctgcctc agccccttcc tctgcctcat ggccagtgcc 900  
gacctccgga ccctgctgcg ctccgtgctc tcgtccttcg cggcagctct ctgcgaggag 960  
cggccgggca gcttcacgcc cactgagcca cagaccagc tagattctga gggccaact 1020  
ctgccagagc cgatggcaga ggcccagtca cagatggatc ctgtggccca gcctcaggtg 1080  
aacccacac tccagccagc atcgatccc acagctcagc cacagctgaa ccctacggcc 1140  
cagccacagt cggatcccac agcccagcca cagctgaacc tcatggccca gccacagtca 1200  
gattctgtgg ccagccaca ggcagacact aacgtccaga ccctgcacc tgctgccagt 1260

## Aren0054.ST25.txt

tctgtgccca gtccctgtga tgaagcttcc ccaaccccat cctcgcatcc taccacaggg 1320  
 gcccttgagg acccagccac acctcctgcc tctgaaggag aaagccccag cagcaccocg 1380  
 ccagaggcgg ccccgggcgc aggccccacg tga 1413

<210> 10  
 <211> 468  
 <212> PRT  
 <213> Homo sapiens

<400> 10

Met Asp Thr Thr Met Glu Ala Asp Leu Gly Ala Thr Gly His Arg Pro  
 1 5 10 15  
 Arg Thr Glu Leu Asp Asp Glu Asp Ser Tyr Pro Gln Gly Gly Trp Asp  
 20 25 30  
 Thr Val Phe Leu Val Ala Leu Leu Leu Leu Gly Leu Pro Ala Asn Gly  
 35 40 45  
 Leu Met Ala Trp Leu Ala Gly Ser Gln Ala Arg His Gly Ala Gly Thr  
 50 55 60  
 Arg Leu Ala Leu Leu Leu Leu Ser Leu Ala Leu Ser Asp Phe Leu Phe  
 65 70 75 80  
 Leu Ala Ala Ala Ala Phe Gln Ile Leu Glu Ile Arg His Gly Gly His  
 85 90 95  
 Trp Pro Leu Gly Thr Ala Ala Cys Arg Phe Tyr Tyr Phe Leu Trp Gly  
 100 105 110  
 Val Ser Tyr Ser Ser Gly Leu Phe Leu Leu Ala Ala Leu Ser Leu Asp  
 115 120 125  
 Arg Cys Leu Leu Ala Leu Cys Pro His Trp Tyr Pro Gly His Arg Pro  
 130 135 140  
 Val Arg Leu Pro Leu Trp Val Cys Ala Gly Val Trp Val Leu Ala Thr  
 145 150 155 160  
 Leu Phe Ser Val Pro Trp Leu Val Phe Pro Glu Ala Ala Val Trp Trp  
 165 170 175  
 Tyr Asp Leu Val Ile Cys Leu Asp Phe Trp Asp Ser Glu Glu Leu Ser  
 180 185 190  
 Leu Arg Met Leu Glu Val Leu Gly Gly Phe Leu Pro Phe Leu Leu Leu  
 195 200 205  
 Leu Val Cys His Val Leu Thr Gln Ala Thr Arg Thr Cys His Arg Gln  
 210 215 220  
 Gln Gln Pro Ala Ala Cys Arg Gly Phe Ala Arg Val Ala Arg Thr Ile  
 225 230 235 240  
 Leu Ser Ala Tyr Val Val Leu Arg Leu Pro Tyr Gln Leu Ala Gln Leu  
 245 250 255  
 Leu Tyr Leu Ala Phe Leu Trp Asp Val Tyr Ser Gly Tyr Leu Leu Trp  
 260 265 270

## Aren0054.ST25.txt

Glu Ala Leu Val Tyr Ser Asp Tyr Leu Ile Leu Leu Asn Ser Cys Leu  
275 280 285

Ser Pro Phe Leu Cys Leu Met Ala Ser Ala Asp Leu Arg Thr Leu Leu  
290 295 300

Arg Ser Val Leu Ser Ser Phe Ala Ala Ala Leu Cys Glu Glu Arg Pro  
305 310 315 320

Gly Ser Phe Thr Pro Thr Glu Pro Gln Thr Gln Leu Asp Ser Glu Gly  
325 330 335

Pro Thr Leu Pro Glu Pro Met Ala Glu Ala Gln Ser Gln Met Asp Pro  
340 345 350

Val Ala Gln Pro Gln Val Asn Pro Thr Leu Gln Pro Arg Ser Asp Pro  
355 360 365

Thr Ala Gln Pro Gln Leu Asn Pro Thr Ala Gln Pro Gln Ser Asp Pro  
370 375 380

Thr Ala Gln Pro Gln Leu Asn Leu Met Ala Gln Pro Gln Ser Asp Ser  
385 390 395 400

Val Ala Gln Pro Gln Ala Asp Thr Asn Val Gln Thr Pro Ala Pro Ala  
405 410 415

Ala Ser Ser Val Pro Ser Pro Cys Asp Glu Ala Ser Pro Thr Pro Ser  
420 425 430

Ser His Pro Thr Pro Gly Ala Leu Glu Asp Pro Ala Thr Pro Pro Ala  
435 440 445

Ser Glu Gly Glu Ser Pro Ser Ser Thr Pro Pro Glu Ala Ala Pro Gly  
450 455 460

Ala Gly Pro Thr  
465

<210> 11  
<211> 1248  
<212> DNA  
<213> Homo sapiens

<400> 11  
atgtcaggga tggaaaaact tcagaatgct tcctggatct accagcagaa actagaagat 60  
ccattccaga aacacctgaa cagcacccag gagtatctgg ccttctctctg cggacctcgg 120  
cgcagccact tcttctctccc cgtgtctgtg gtgtatgtgc caatttttgt ggtgggggtc 180  
attggcaatg tcctgggtgtg cctgggtgatt ctgcagcacc aggctatgaa gacgcccacc 240  
aactactacc tcttcagcct ggcgggtctct gacctcctgg tcctgctcct tggaatgcc 300  
ctggaggtct atgagatgtg gcgcaactac cctttcttgt tcgggcccgt gggctgctac 360  
ttcaagacgg cctcttttga gaccgtgtgc ttgcctcca tcctcagcat caccaccgtc 420  
agcgtggagc gctacgtggc catctacac ccgttcgcgc ccaaactgca gagcaccgg 480  
cgccggggccc tcaggatcct cggcatcgtc tggggcttct ccgtgctctt ctccctgcc 540  
aacaccagca tccatggcat caagttcac tacttcccca atgggtccct ggtcccaggt 600

Aren0054.ST25.txt

```
tcggccacct gtacgggtcat caagcccatg tggatctaca atttcatcat ccaggtcacc 660
tccttcctat tctacctcct ccccatgact gtcatcagtg tcctctacta cctcatggca 720
ctcagactaa agaaagacaa atctcttgag gcagatgaag ggaatgcaaa tattcaaaga 780
ccctgcagaa aatcagtcaa caagatgctg tttgtcttg tcttagtggt tgctatctgt 840
tgggccccgt tccacattga ccgactcttc ttcagctttg tggaggagtg gagtgaatcc 900
ctggctgctg tgttcaacct cgtccatgtg gtgtcaggtg tcttcttcta cctgagctca 960
gctgtcaacc ccattatcta taacctactg tctcgccgct tccaggcagc attccagaat 1020
gtgatctctt ctttccacaa acagtggcac tcccagcatg acccacagtt gccacctgcc 1080
cagcgggaaca tcttctgac agaatgccac tttgtggagc tgaccgaaga tataggtccc 1140
caattcccat gtcagtcata catgcacaac tctcacctcc caacagccct ctctagtga 1200
cagatgtcaa gaacaaacta tcaaagcttc cactttaaca aaacctga 1248
```

<210> 12  
 <211> 415  
 <212> PRT  
 <213> Homo sapiens

<400> 12

```
Met Ser Gly Met Glu Lys Leu Gln Asn Ala Ser Trp Ile Tyr Gln Gln
1 5 10 15
Lys Leu Glu Asp Pro Phe Gln Lys His Leu Asn Ser Thr Glu Glu Tyr
20 25 30
Leu Ala Phe Leu Cys Gly Pro Arg Arg Ser His Phe Phe Leu Pro Val
35 40 45
Ser Val Val Tyr Val Pro Ile Phe Val Val Gly Val Ile Gly Asn Val
50 55 60
Leu Val Cys Leu Val Ile Leu Gln His Gln Ala Met Lys Thr Pro Thr
65 70 75 80
Asn Tyr Tyr Leu Phe Ser Leu Ala Val Ser Asp Leu Leu Val Leu Leu
85 90 95
Leu Gly Met Pro Leu Glu Val Tyr Glu Met Trp Arg Asn Tyr Pro Phe
100 105 110
Leu Phe Gly Pro Val Gly Cys Tyr Phe Lys Thr Ala Leu Phe Glu Thr
115 120 125
Val Cys Phe Ala Ser Ile Leu Ser Ile Thr Thr Val Ser Val Glu Arg
130 135 140
Tyr Val Ala Ile Leu His Pro Phe Arg Ala Lys Leu Gln Ser Thr Arg
145 150 155 160
Arg Arg Ala Leu Arg Ile Leu Gly Ile Val Trp Gly Phe Ser Val Leu
165 170 175
Phe Ser Leu Pro Asn Thr Ser Ile His Gly Ile Lys Phe His Tyr Phe
180 185 190
```

## Aren0054.ST25.txt

Pro Asn Gly Ser Leu Val Pro Gly Ser Ala Thr Cys Thr Val Ile Lys  
195 200 205

Pro Met Trp Ile Tyr Asn Phe Ile Ile Gln Val Thr Ser Phe Leu Phe  
210 215 220

Tyr Leu Leu Pro Met Thr Val Ile Ser Val Leu Tyr Tyr Leu Met Ala  
225 230 235 240

Leu Arg Leu Lys Lys Asp Lys Ser Leu Glu Ala Asp Glu Gly Asn Ala  
245 250 255

Asn Ile Gln Arg Pro Cys Arg Lys Ser Val Asn Lys Met Leu Phe Val  
260 265 270

Leu Val Leu Val Phe Ala Ile Cys Trp Ala Pro Phe His Ile Asp Arg  
275 280 285

Leu Phe Phe Ser Phe Val Glu Glu Trp Ser Glu Ser Leu Ala Ala Val  
290 295 300

Phe Asn Leu Val His Val Val Ser Gly Val Phe Phe Tyr Leu Ser Ser  
305 310 315 320

Ala Val Asn Pro Ile Ile Tyr Asn Leu Leu Ser Arg Arg Phe Gln Ala  
325 330 335

Ala Phe Gln Asn Val Ile Ser Ser Phe His Lys Gln Trp His Ser Gln  
340 345 350

His Asp Pro Gln Leu Pro Pro Ala Gln Arg Asn Ile Phe Leu Thr Glu  
355 360 365

Cys His Phe Val Glu Leu Thr Glu Asp Ile Gly Pro Gln Phe Pro Cys  
370 375 380

Gln Ser Ser Met His Asn Ser His Leu Pro Thr Ala Leu Ser Ser Glu  
385 390 395 400

Gln Met Ser Arg Thr Asn Tyr Gln Ser Phe His Phe Asn Lys Thr  
405 410 415

<210> 13

<211> 1173

<212> DNA

<213> Homo sapiens

<400> 13

atgccagata ctaatagcac aatcaattta tcactaagca ctctgtgttac tttagcattt 60

tttatgtcct tagtagcttt tgctataatg ctaggaaatg ctttggtcat tttagctttt 120

gtggtggaca aaaaccttag acatcgaagt agttattttt ttcttaactt ggccatctct 180

gacttctttg tgggtgtgat ctccattcct ttgtacatcc ctcacacgct gttcgaatgg 240

gattttggaa aggaaatctg tgtatttttg ctactactg actatctggt atgtacagca 300

tctgtatata acattgtcct catcagctat gatcgatacc tgtcagtcct aaatgctgtg 360

tcttatagaa ctcaacatac tggggctctg aagattgtta ctctgatggg gccggtttgg 420

gtgctggcct tcttagtgaa tgggccaatg attctagttt cagagtcttg gaaggatgaa 480

## Aren0054.ST25.txt

```

ggtagtgaat gtgaacctgg atttttttcg gaatggtaca tccttgccat cacatcattc 540
ttggaattcg tgatcccagt catcttagtc gcttatttca acatgaatat ttattggagc 600
ctgtggaagc gtgatcatct cagtaggtgc caaagccatc ctggactgac tgctgtctct 660
tccaacatct gtggacactc attcagaggt agactatctt caaggagatc tctttctgca 720
tcgacagaag ttcttgcac ctttcattca gagagacaga ggagaaagag tagtctcatg 780
ttttctcaa gaaccaagat gaatagcaat acaattgctt ccaaaatggg ttccttctcc 840
caatcagatt ctgtagctct tcaccaaagg gaacatgttg aactgcttag agccaggaga 900
ttagccaagt cactggccat tctcttaggg gtttttctg tttgtgggc tccatattct 960
ctgttcacaa ttgtcctttc attttattcc tcagcaacag gtcctaaatc agtttggtat 1020
agaattgcat ttgggcttca gtggttcaat tcctttgtca atcctctttt gtatccattg 1080
tgtcacaagc gctttcaaaa ggctttcttg aaaatatttt gtataaaaaa gcaacctcta 1140
ccatcacaa acagtcgggc agtatcttct taa 1173

```

```

<210> 14
<211> 390
<212> PRT
<213> Homo sapiens

```

```

<400> 14

```

```

Met Pro Asp Thr Asn Ser Thr Ile Asn Leu Ser Leu Ser Thr Arg Val
1          5          10          15
Thr Leu Ala Phe Phe Met Ser Leu Val Ala Phe Ala Ile Met Leu Gly
          20          25          30
Asn Ala Leu Val Ile Leu Ala Phe Val Val Asp Lys Asn Leu Arg His
          35          40          45
Arg Ser Ser Tyr Phe Phe Leu Asn Leu Ala Ile Ser Asp Phe Phe Val
          50          55          60
Gly Val Ile Ser Ile Pro Leu Tyr Ile Pro His Thr Leu Phe Glu Trp
65          70          75          80
Asp Phe Gly Lys Glu Ile Cys Val Phe Trp Leu Thr Thr Asp Tyr Leu
          85          90          95
Leu Cys Thr Ala Ser Val Tyr Asn Ile Val Leu Ile Ser Tyr Asp Arg
          100          105          110
Tyr Leu Ser Val Ser Asn Ala Val Ser Tyr Arg Thr Gln His Thr Gly
          115          120          125
Val Leu Lys Ile Val Thr Leu Met Val Ala Val Trp Val Leu Ala Phe
          130          135          140
Leu Val Asn Gly Pro Met Ile Leu Val Ser Glu Ser Trp Lys Asp Glu
145          150          155          160
Gly Ser Glu Cys Glu Pro Gly Phe Phe Ser Glu Trp Tyr Ile Leu Ala
          165          170          175

```

Aren0054.ST25.txt

Ile Thr Ser Phe Leu Glu Phe Val Ile Pro Val Ile Leu Val Ala Tyr  
 180 185 190

Phe Asn Met Asn Ile Tyr Trp Ser Leu Trp Lys Arg Asp His Leu Ser  
 195 200 205

Arg Cys Gln Ser His Pro Gly Leu Thr Ala Val Ser Ser Asn Ile Cys  
 210 215 220

Gly His Ser Phe Arg Gly Arg Leu Ser Ser Arg Arg Ser Leu Ser Ala  
 225 230 235 240

Ser Thr Glu Val Pro Ala Ser Phe His Ser Glu Arg Gln Arg Arg Lys  
 245 250 255

Ser Ser Leu Met Phe Ser Ser Arg Thr Lys Met Asn Ser Asn Thr Ile  
 260 265 270

Ala Ser Lys Met Gly Ser Phe Ser Gln Ser Asp Ser Val Ala Leu His  
 275 280 285

Gln Arg Glu His Val Glu Leu Leu Arg Ala Arg Arg Leu Ala Lys Ser  
 290 295 300

Leu Ala Ile Leu Leu Gly Val Phe Ala Val Cys Trp Ala Pro Tyr Ser  
 305 310 315 320

Leu Phe Thr Ile Val Leu Ser Phe Tyr Ser Ser Ala Thr Gly Pro Lys  
 325 330 335

Ser Val Trp Tyr Arg Ile Ala Phe Trp Leu Gln Trp Phe Asn Ser Phe  
 340 345 350

Val Asn Pro Leu Leu Tyr Pro Leu Cys His Lys Arg Phe Gln Lys Ala  
 355 360 365

Phe Leu Lys Ile Phe Cys Ile Lys Lys Gln Pro Leu Pro Ser Gln His  
 370 375 380

Ser Arg Ser Val Ser Ser  
 385 390

<210> 15  
 <211> 30  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 15  
 ggaaagctta acgatcccca ggagcaacat

30

<210> 16  
 <211> 31  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 16  
 ctgggacatcct acgagagcat ttttcacaca g

31



Aren0054.ST25.txt

<210> 17  
<211> 1128  
<212> DNA  
<213> Homo sapiens

<400> 17  
atggcggaacg cgagcgagcc ggggtggcagc ggcggcgggc aggcggccgc cctgggcctc 60  
aagctggcca cgctcagcct gctgctgtgc gtgagcctag cgggcaacgt gctgttcgcg 120  
ctgctgatcg tgcgggagcg cagcctgcac cgcgccccgt actacctgct gctcgacctg 180  
tgcctggccg acgggctgcg cgcgctcgcc tgcctcccg cgtcatgct ggcggcgcg 240  
cgtgcggcgg ccgcgggcgg ggcgcgcggc ggcgcgctgg gctgcaagct gctcgccttc 300  
ctggccgcgc tcttctgctt ccacgcgcgc ttcctgctgc tgggcgtggg cgtcaccgc 360  
tacctggcca tcgcgcacca ccgcttctat gcagagcgcc tggccggctg gccgtgcgcc 420  
gcatgctgg tgtgcgcgc ctgggcgctg gcgctggccg cggccttccc gccagtgtg 480  
gacggcgggtg gcgacgacga ggacgcgcgc tgcgccctgg agcagcggcc cgacggcgcc 540  
cccgcgcgcg tgggcttcct gctgctgtg gccgtggtg tggcgccac gcacctcgtc 600  
tacctcgcc tgccttctt catccacgac cgcgcaaga tgcggccgc gcgctggtg 660  
cccgccgtca gccacgactg gaccttccac ggccccggcg ccaccggcca ggcggccgcc 720  
aactggacgg cgggcttcgg ccgcgggccc acgcccgcg cgttgtggg catcggccc 780  
gcagggccgg gcccgggcg gcgcgcctc ctgctgctg aagaattcaa gacggagaag 840  
aggctgtgca agatgttcta cgcgctcac ctgctcttc tgcctctctg ggggccctac 900  
gtcgtggcca gctacctgc ggtcctggtg cggcccgcg ccgtcccca ggcctacctg 960  
acggcctcgg tgtggctgac ctgcgcgag gccggcatca acccgctcgt gtgcttcctc 1020  
ttcaacaggg agctgagga ctgcttcagg gccagttcc cctgctgcca gagccccgg 1080  
accaccagg cgaccatcc ctgcgacctg aaaggcattg gtttatga 1128

<210> 18  
<211> 375  
<212> PRT  
<213> Homo sapiens

<400> 18  
Met Ala Asn Ala Ser Glu Pro Gly Gly Ser Gly Gly Glu Ala Ala  
1 5 10 15  
Ala Leu Gly Leu Lys Leu Ala Thr Leu Ser Leu Leu Leu Cys Val Ser  
20 25 30  
Leu Ala Gly Asn Val Leu Phe Ala Leu Leu Ile Val Arg Glu Arg Ser  
35 40 45  
Leu His Arg Ala Pro Tyr Tyr Leu Leu Leu Asp Leu Cys Leu Ala Asp  
50 55 60

Aren0054.ST25.txt

Gly Leu Arg Ala Leu Ala Cys Leu Pro Ala Val Met Leu Ala Ala Arg  
65 70 75 80

Arg Ala Ala Ala Ala Ala Gly Ala Pro Pro Gly Ala Leu Gly Cys Lys  
85 90 95

Leu Leu Ala Phe Leu Ala Ala Leu Phe Cys Phe His Ala Ala Phe Leu  
100 105 110

Leu Leu Gly Val Gly Val Thr Arg Tyr Leu Ala Ile Ala His His Arg  
115 120 125

Phe Tyr Ala Glu Arg Leu Ala Gly Trp Pro Cys Ala Ala Met Leu Val  
130 135 140

Cys Ala Ala Trp Ala Leu Ala Leu Ala Ala Phe Pro Pro Val Leu  
145 150 155 160

Asp Gly Gly Gly Asp Asp Glu Asp Ala Pro Cys Ala Leu Glu Gln Arg  
165 170 175

Pro Asp Gly Ala Pro Gly Ala Leu Gly Phe Leu Leu Leu Leu Ala Val  
180 185 190

Val Val Gly Ala Thr His Leu Val Tyr Leu Arg Leu Leu Phe Phe Ile  
195 200 205

His Asp Arg Arg Lys Met Arg Pro Ala Arg Leu Val Pro Ala Val Ser  
210 215 220

His Asp Trp Thr Phe His Gly Pro Gly Ala Thr Gly Gln Ala Ala Ala  
225 230 235 240

Asn Trp Thr Ala Gly Phe Gly Arg Gly Pro Thr Pro Pro Ala Leu Val  
245 250 255

Gly Ile Arg Pro Ala Gly Pro Gly Arg Gly Ala Arg Arg Leu Leu Val  
260 265 270

Leu Glu Glu Phe Lys Thr Glu Lys Arg Leu Cys Lys Met Phe Tyr Ala  
275 280 285

Val Thr Leu Leu Phe Leu Leu Leu Trp Gly Pro Tyr Val Val Ala Ser  
290 295 300

Tyr Leu Arg Val Leu Val Arg Pro Gly Ala Val Pro Gln Ala Tyr Leu  
305 310 315 320

Thr Ala Ser Val Trp Leu Thr Phe Ala Gln Ala Gly Ile Asn Pro Val  
325 330 335

Val Cys Phe Leu Phe Asn Arg Glu Leu Arg Asp Cys Phe Arg Ala Gln  
340 345 350

Phe Pro Cys Cys Gln Ser Pro Arg Thr Thr Gln Ala Thr His Pro Cys  
355 360 365

Asp Leu Lys Gly Ile Gly Leu  
370 375

<210> 19  
<211> 1002  
<212> DNA  
<213> Homo sapiens

```

<400> 19
atgaacacca cagtgatgca aggccttcaac agatctgagc ggtgccccag agacactcgg      60
atagtacagc tgggtattccc agccctctac acagtggttt tcttgaccgg catcctgctg      120
aatactttgg ctctgtgggt gtttgttcac atccccagct cctccacctt catcatctac      180
ctcaaaaaca ctttggtggc cgacttgata atgacactca tgcttccttt caaaatcctc      240
tctgactcac acctggcacc ctggcagctc agagcttttg tgtgtcgttt ttcttcgggtg      300
atattttatg agaccatgta tgtgggcatc gtgctgtag ggctcatagc ctttgacaga      360
ttcctcaaga tcacagacc tttgagaaat atttttctaa aaaaacctgt ttttgcaaaa      420
acggtctcaa tcttcactctg gttctttttg ttcttcatct ccctgccaaa tacgatcttg      480
agcaacaagg aagcaacacc atcgtctgtg aaaaagtgtg cttccttaaa ggggcctctg      540
gggctgaaat ggcacaaat ggtaaataac atatgccagt ttattttctg gactgttttt      600
atcctaatagc ttgtgtttta tgtggttatt gcaaaaaaag tatatgattc ttatagaaag      660
tccaaaagta aggacagaaa aaacaacaaa aagctggaag gcaaagtatt tgtgtcgtg      720
gctgtcttct ttgtgtgttt tgctccattt cattttgcca gagttccata tactcacagt      780
caaaccaaca ataagactga ctgtagactg caaaatcaac tgtttattgc taaagaaaca      840
actctctttt tggcagcaac taacatttgt atggatccct taatatacat attcttatgt      900
aaaaaattca cagaaaagct accatgtatg caaggagaa agaccacagc atcaagccaa      960
gaaaatcata gcagtcagac agacaacata acctaggct ga                          1002

```

```

<210> 20
<211> 333
<212> PRT
<213> Homo sapiens

```

```

<400> 20

```

```

Met Asn Thr Thr Val Met Gln Gly Phe Asn Arg Ser Glu Arg Cys Pro
1          5          10          15
Arg Asp Thr Arg Ile Val Gln Leu Val Phe Pro Ala Leu Tyr Thr Val
20          25          30
Val Phe Leu Thr Gly Ile Leu Leu Asn Thr Leu Ala Leu Trp Val Phe
35          40          45
Val His Ile Pro Ser Ser Ser Thr Phe Ile Ile Tyr Leu Lys Asn Thr
50          55          60
Leu Val Ala Asp Leu Ile Met Thr Leu Met Leu Pro Phe Lys Ile Leu
65          70          75          80
Ser Asp Ser His Leu Ala Pro Trp Gln Leu Arg Ala Phe Val Cys Arg
85          90          95
Phe Ser Ser Val Ile Phe Tyr Glu Thr Met Tyr Val Gly Ile Val Leu
100         105         110
Leu Gly Leu Ile Ala Phe Asp Arg Phe Leu Lys Ile Ile Arg Pro Leu

```

115

120

125

Arg Asn Ile Phe Leu Lys Lys Pro Val Phe Ala Lys Thr Val Ser Ile  
 130 135 140  
 Phe Ile Trp Phe Phe Leu Phe Phe Ile Ser Leu Pro Asn Thr Ile Leu  
 145 150 155 160  
 Ser Asn Lys Glu Ala Thr Pro Ser Ser Val Lys Lys Cys Ala Ser Leu  
 165 170 175  
 Lys Gly Pro Leu Gly Leu Lys Trp His Gln Met Val Asn Asn Ile Cys  
 180 185 190  
 Gln Phe Ile Phe Trp Thr Val Phe Ile Leu Met Leu Val Phe Tyr Val  
 195 200 205  
 Val Ile Ala Lys Lys Val Tyr Asp Ser Tyr Arg Lys Ser Lys Ser Lys  
 210 215 220  
 Asp Arg Lys Asn Asn Lys Lys Leu Glu Gly Lys Val Phe Val Val Val  
 225 230 235 240  
 Ala Val Phe Phe Val Cys Phe Ala Pro Phe His Phe Ala Arg Val Pro  
 245 250 255  
 Tyr Thr His Ser Gln Thr Asn Asn Lys Thr Asp Cys Arg Leu Gln Asn  
 260 265 270  
 Gln Leu Phe Ile Ala Lys Glu Thr Thr Leu Phe Leu Ala Ala Thr Asn  
 275 280 285  
 Ile Cys Met Asp Pro Leu Ile Tyr Ile Phe Leu Cys Lys Lys Phe Thr  
 290 295 300  
 Glu Lys Leu Pro Cys Met Gln Gly Arg Lys Thr Thr Ala Ser Ser Gln  
 305 310 315 320  
 Glu Asn His Ser Ser Gln Thr Asp Asn Ile Thr Leu Gly  
 325 330

&lt;210&gt; 21

&lt;211&gt; 1122

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 21

atggccaaca ctaccggaga gcctgaggag gtgagcggcg ctctgtcccc accgtccgca 60  
 tcagcttatg tgaagctggt actgctggga ctgattatgt gcgtgagcct ggcgggtaac 120  
 gccatcttgt cctgtctggt gctcaaggag cgtgccctgc acaaggctcc ttactacttc 180  
 ctgctggacc tgtgcctggc cgatggcata cgctctgccg tctgcttccc ctttgtgctg 240  
 gcttctgtgc gccacggctc ttcattggacc ttcagtgcac tcagctgcaa gattgtggcc 300  
 tttatggcgg tgctcttttg ctccatgcg gccttcatgc tgttctgcat cagcgtcacc 360  
 cgctacatgg ccatacgccc ccaccgcttc tacgccaagc gcatgacact ctggacatgc 420  
 gcggctgtca tctgcatggc ctggaccctg tctgtggcca tggccttccc acctgtcttt 480  
 gacgtgggca cctacaagtt tattcgggag gaggaccagt gcatctttga gcatcgctac 540

## Aren0054.ST25.txt

```

ttcaaggcca atgacacgct gggcttcatg cttatgttgg ctgtgctcat ggcagctacc 600
catgctgtct acggcaagct gtcctcttcc gagtatcgtc accgcaagat gaagccagtg 660
cagatggtgc cagccatcag ccagaactgg acattccatg gtcccggggc caccggccag 720
gctgctgcca actggatcgc cggctttggc cgtgggcccc tgccaccaac cctgctgggt 780
atccggcaga atgggcatgc agccagccgg cggctactgg gcatggacga ggtcaagggt 840
gaaaagcagc tgggcccgcg gttctacgcg atcacactgc tctttctgct cctctgggtca 900
ccctacatcg tggcctgcta ctggcgagtg tttgtgaaag cctgtgctgt gccccaccgc 960
tacctggcca ctgctgtttg gatgagcttc gccagggtg ccgtcaacc aattgtctgc 1020
ttcctgctca acaaggacct caagaagtgc ctgaccactc acgccccctg ctggggcaca 1080
ggaggtgccc cggctcccag agaaccctac tgtgtcatgt ga 1122

```

```

<210> 22
<211> 373
<212> PRT
<213> Homo sapiens

```

```
<400> 22
```

```

Met Ala Asn Thr Thr Gly Glu Pro Glu Glu Val Ser Gly Ala Leu Ser
1          5          10          15
Pro Pro Ser Ala Ser Ala Tyr Val Lys Leu Val Leu Leu Gly Leu Ile
          20          25          30
Met Cys Val Ser Leu Ala Gly Asn Ala Ile Leu Ser Leu Leu Val Leu
          35          40          45
Lys Glu Arg Ala Leu His Lys Ala Pro Tyr Tyr Phe Leu Leu Asp Leu
          50          55          60
Cys Leu Ala Asp Gly Ile Arg Ser Ala Val Cys Phe Pro Phe Val Leu
65          70          75          80
Ala Ser Val Arg His Gly Ser Ser Trp Thr Phe Ser Ala Leu Ser Cys
          85          90          95
Lys Ile Val Ala Phe Met Ala Val Leu Phe Cys Phe His Ala Ala Phe
          100          105          110
Met Leu Phe Cys Ile Ser Val Thr Arg Tyr Met Ala Ile Ala His His
          115          120          125
Arg Phe Tyr Ala Lys Arg Met Thr Leu Trp Thr Cys Ala Ala Val Ile
          130          135          140
Cys Met Ala Trp Thr Leu Ser Val Ala Met Ala Phe Pro Pro Val Phe
145          150          155          160
Asp Val Gly Thr Tyr Lys Phe Ile Arg Glu Glu Asp Gln Cys Ile Phe
          165          170          175
Glu His Arg Tyr Phe Lys Ala Asn Asp Thr Leu Gly Phe Met Leu Met
          180          185          190
Leu Ala Val Leu Met Ala Ala Thr His Ala Val Tyr Gly Lys Leu Leu

```

195

200

205

Leu Phe Glu Tyr Arg His Arg Lys Met Lys Pro Val Gln Met Val Pro  
 210 215 220

Ala Ile Ser Gln Asn Trp Thr Phe His Gly Pro Gly Ala Thr Gly Gln  
 225 230 235 240

Ala Ala Ala Asn Trp Ile Ala Gly Phe Gly Arg Gly Pro Met Pro Pro  
 245 250 255

Thr Leu Leu Gly Ile Arg Gln Asn Gly His Ala Ala Ser Arg Arg Leu  
 260 265 270

Leu Gly Met Asp Glu Val Lys Gly Glu Lys Gln Leu Gly Arg Met Phe  
 275 280 285

Tyr Ala Ile Thr Leu Leu Phe Leu Leu Leu Trp Ser Pro Tyr Ile Val  
 290 295 300

Ala Cys Tyr Trp Arg Val Phe Val Lys Ala Cys Ala Val Pro His Arg  
 305 310 315 320

Tyr Leu Ala Thr Ala Val Trp Met Ser Phe Ala Gln Ala Ala Val Asn  
 325 330 335

Pro Ile Val Cys Phe Leu Leu Asn Lys Asp Leu Lys Lys Cys Leu Thr  
 340 345 350

Thr His Ala Pro Cys Trp Gly Thr Gly Gly Ala Pro Ala Pro Arg Glu  
 355 360 365

Pro Tyr Cys Val Met  
 370

<210> 23

<211> 1053

<212> DNA

<213> Homo sapiens

<400> 23

atggcttttg aacagaacca gtcaacagat tattattatg aggaaaatga aatgaatggc 60

acttatgact acagtcaata tgaattgatc tgtatcaaag aagatgtcag agaatttgca 120

aaagttttcc tccctgtatt cctcacaata gctttcgtca ttggacttgc aggcaattcc 180

atggtagtgg caatttatgc ctattacaag aaacagagaa ccaaaacaga tgtgtacatc 240

ctgaatttgg ctgtagcaga ttactcctt ctattcactc tgcctttttg ggctgttaat 300

gcagttcatg ggtgggtttt agggaaaata atgtgcaaaa taacttcagc cttgtacaca 360

ctaaactttg tctctggaat gcagtttctg gcttgcatca gcatagacag atatgtggca 420

gtaactaatg tccccagcca atcaggagtg ggaaaacat gctggatcat ctgtttctgt 480

gtctggatgg ctgccatctt gctgagcata cccagctgg ttttttatac agtaaataac 540

aatgctaggt gcattcccat tttccccgc tacctaggaa catcaatgaa agcattgatt 600

caaatgctag agatctgcat tggatttgta gtaccctttc ttattatggg ggtgtgctac 660

tttatcacgg caaggacact catgaagatg ccaaacatta aaatatctcg acccctaaaa 720

## Aren0054.ST25.txt

```

gtttctgctca cagtcggttat agttttcatt gtcactcaac tgccttataa cattgtcaag 780
ttctgcccagag ccatagacat catctactcc ctgataacca gctgcaacat gagcaaacgc 840
atggacatcg ccatccaagt cacagaaagc attgcactct ttcacagctg cctcaaccga 900
atccttttatg tttttatggg agcatctttc aaaaactacg ttatgaaagt ggccaagaaa 960
tatgggtcct ggagaagaca gagacaaagt gtggaggagt ttccttttga ttctgagggt 1020
cctacagagc caaccagtac ttttagcatt taa 1053

```

<210> 24  
 <211> 350  
 <212> PRT  
 <213> Homo sapiens

<400> 24

```

Met Ala Leu Glu Gln Asn Gln Ser Thr Asp Tyr Tyr Tyr Glu Glu Asn
1          5          10          15
Glu Met Asn Gly Thr Tyr Asp Tyr Ser Gln Tyr Glu Leu Ile Cys Ile
20          25          30
Lys Glu Asp Val Arg Glu Phe Ala Lys Val Phe Leu Pro Val Phe Leu
35          40          45
Thr Ile Ala Phe Val Ile Gly Leu Ala Gly Asn Ser Met Val Val Ala
50          55          60
Ile Tyr Ala Tyr Tyr Lys Lys Gln Arg Thr Lys Thr Asp Val Tyr Ile
65          70          75          80
Leu Asn Leu Ala Val Ala Asp Leu Leu Leu Leu Phe Thr Leu Pro Phe
85          90          95
Trp Ala Val Asn Ala Val His Gly Trp Val Leu Gly Lys Ile Met Cys
100         105         110
Lys Ile Thr Ser Ala Leu Tyr Thr Leu Asn Phe Val Ser Gly Met Gln
115         120         125
Phe Leu Ala Cys Ile Ser Ile Asp Arg Tyr Val Ala Val Thr Asn Val
130         135         140
Pro Ser Gln Ser Gly Val Gly Lys Pro Cys Trp Ile Ile Cys Phe Cys
145         150         155         160
Val Trp Met Ala Ala Ile Leu Leu Ser Ile Pro Gln Leu Val Phe Tyr
165         170         175
Thr Val Asn Asp Asn Ala Arg Cys Ile Pro Ile Phe Pro Arg Tyr Leu
180         185         190
Gly Thr Ser Met Lys Ala Leu Ile Gln Met Leu Glu Ile Cys Ile Gly
195         200         205
Phe Val Val Pro Phe Leu Ile Met Gly Val Cys Tyr Phe Ile Thr Ala
210         215         220
Arg Thr Leu Met Lys Met Pro Asn Ile Lys Ile Ser Arg Pro Leu Lys
225         230         235         240

```

Aren0054.ST25.txt

Val Leu Leu Thr Val Val Ile Val Phe Ile Val Thr Gln Leu Pro Tyr  
245 250 255

Asn Ile Val Lys Phe Cys Arg Ala Ile Asp Ile Ile Tyr Ser Leu Ile  
260 265 270

Thr Ser Cys Asn Met Ser Lys Arg Met Asp Ile Ala Ile Gln Val Thr  
275 280 285

Glu Ser Ile Ala Leu Phe His Ser Cys Leu Asn Pro Ile Leu Tyr Val  
290 295 300

Phe Met Gly Ala Ser Phe Lys Asn Tyr Val Met Lys Val Ala Lys Lys  
305 310 315 320

Tyr Gly Ser Trp Arg Arg Gln Arg Gln Ser Val Glu Glu Phe Pro Phe  
325 330 335

Asp Ser Glu Gly Pro Thr Glu Pro Thr Ser Thr Phe Ser Ile  
340 345 350

<210> 25

<211> 1116

<212> DNA

<213> Homo sapiens

<400> 25

atgccaggaa acgccacccc agtgaccacc actgccccgt gggcctccct gggcctctcc 60  
gccaagacct gcaacaacgt gtccttcgaa gagagcagga tagtcctggg cgtgggtgtac 120  
agcgcggtgt gcacgctggg ggtgccggcc aactgcctga ctgcgtggct ggcgctgctg 180  
caggtactgc agggcaacgt gctggccgtc tacctgctct gcctggcact ctgcgaactg 240  
ctgtacacag gcacgctgcc actctgggtc atctatatcc gcaaccagca ccgctggacc 300  
ctaggcctgc tggcctcgaa ggtgaccgcc tacatcttct tctgcaacat ctacgtcagc 360  
atcctcttcc tgtgtgcat ctctgcgac cgcttcgtgg ccgtggtgta cgcgctggag 420  
agtcggggcc gccgcgcgcg gaggaccgcc atoctcatct ccgcctgcat cttcatcctc 480  
gtcgggatcg ttactaccc ggtgttcag acggaagaca aggagacctg ctttgacatg 540  
ctgcagatgg acagcaggat tgccgggtac tactacgcca ggttcaccgt tggttttgcc 600  
atcctctctc ccatcatcgc cttcaccaac caccggattt tcaggagcat caagcagagc 660  
atgggcttaa gcgctgccc gaaggccaag gtgaagcact cggccatcgc ggtggttgtc 720  
atcttcttag tctgcttcgc cccgtaccac ctggttctcc tcgtcaaagc cgctgccttt 780  
tcctactaca gaggagacag gaacgccatg tgccgcttgg aggaaaggct gtacacagcc 840  
tctgtggtgt ttctgtgcct gtccacggtg aacggcggtg ctgaccccat tatctacgtg 900  
ctggccacgg accattccc ccaagaagtg tccagaatcc ataaggggtg gaaagagtgg 960  
tccatgaaga cagacgtcac caggctcacc cacagcagg acaccgagga gctgcagtcg 1020  
cccgtagccc ttgcagacca ctacaccttc tccaggccc tgcacccacc agggtcacca 1080  
tgccctgcaa agaggctgat tgaggagtcc tgctga 1116



Aren0054.ST25.txt

<210> 26  
 <211> 371  
 <212> PRT  
 <213> Homo sapiens

<400> 26

```

Met Pro Gly Asn Ala Thr Pro Val Thr Thr Thr Ala Pro Trp Ala Ser
1          5          10          15

Leu Gly Leu Ser Ala Lys Thr Cys Asn Asn Val Ser Phe Glu Glu Ser
          20          25          30

Arg Ile Val Leu Val Val Val Tyr Ser Ala Val Cys Thr Leu Gly Val
          35          40          45

Pro Ala Asn Cys Leu Thr Ala Trp Leu Ala Leu Leu Gln Val Leu Gln
          50          55          60

Gly Asn Val Leu Ala Val Tyr Leu Leu Cys Leu Ala Leu Cys Glu Leu
65          70          75          80

Leu Tyr Thr Gly Thr Leu Pro Leu Trp Val Ile Tyr Ile Arg Asn Gln
          85          90          95

His Arg Trp Thr Leu Gly Leu Leu Ala Ser Lys Val Thr Ala Tyr Ile
          100          105          110

Phe Phe Cys Asn Ile Tyr Val Ser Ile Leu Phe Leu Cys Cys Ile Ser
          115          120          125

Cys Asp Arg Phe Val Ala Val Val Tyr Ala Leu Glu Ser Arg Gly Arg
          130          135          140

Arg Arg Arg Arg Thr Ala Ile Leu Ile Ser Ala Cys Ile Phe Ile Leu
145          150          155          160

Val Gly Ile Val His Tyr Pro Val Phe Gln Thr Glu Asp Lys Glu Thr
          165          170          175

Cys Phe Asp Met Leu Gln Met Asp Ser Arg Ile Ala Gly Tyr Tyr Tyr
          180          185          190

Ala Arg Phe Thr Val Gly Phe Ala Ile Pro Leu Ser Ile Ile Ala Phe
          195          200          205

Thr Asn His Arg Ile Phe Arg Ser Ile Lys Gln Ser Met Gly Leu Ser
          210          215          220

Ala Ala Gln Lys Ala Lys Val Lys His Ser Ala Ile Ala Val Val Val
225          230          235          240

Ile Phe Leu Val Cys Phe Ala Pro Tyr His Leu Val Leu Leu Val Lys
          245          250          255

Ala Ala Ala Phe Ser Tyr Tyr Arg Gly Asp Arg Asn Ala Met Cys Gly
          260          265          270

Leu Glu Glu Arg Leu Tyr Thr Ala Ser Val Val Phe Leu Cys Leu Ser
          275          280          285

Thr Val Asn Gly Val Ala Asp Pro Ile Ile Tyr Val Leu Ala Thr Asp
          290          295          300
  
```

Aren0054.ST25.txt

His Ser Arg Gln Glu Val Ser Arg Ile His Lys Gly Trp Lys Glu Trp  
305 310 315 320

Ser Met Lys Thr Asp Val Thr Arg Leu Thr His Ser Arg Asp Thr Glu  
325 330 335

Glu Leu Gln Ser Pro Val Ala Leu Ala Asp His Tyr Thr Phe Ser Arg  
340 345 350

Pro Val His Pro Pro Gly Ser Pro Cys Pro Ala Lys Arg Leu Ile Glu  
355 360 365

Glu Ser Cys  
370

<210> 27  
<211> 1113  
<212> DNA  
<213> Homo sapiens

<400> 27  
atggcgaaact atagccatgc agctgacaac attttgcaaa atctctcgcc tctaacagcc 60  
tttctgaaac tgacttcctt gggtttcata ataggagtca gcgtggtggg caacctcctg 120  
atctccattt tgctagtga agataagacc ttgcatagag caccttacta cttcctgttg 180  
gatctttgct gttcagatat cctcagatct gcaatttgtt tcccatttgt gttcaactct 240  
gtcaaaaatg gctctacctg gacttatggg actctgactt gcaaagtgat tgcctttctg 300  
gggggtttgt cctgtttcca cactgctttc atgctcttct gcatcagtgt caccagatac 360  
ttagctatcg cccatcaccg cttctataca aagaggctga ctttttggac gtgtctggct 420  
gtgatctgta tgggtggtgac tctgtctgtg gccatggcat ttccccgggt ttagacgtg 480  
ggcacttact cattcattag ggaggaagat caatgcacct tccaacaccg ctccttcagg 540  
gctaattgatt ccttaggatt tatgctgctt cttgctctca tcctcctagc cacacagctt 600  
gtctacctca agctgatatt ttctgtccac gatcgaagaa aaatgaagcc agtccagttt 660  
gtagcagcag tcagccagaa ctggactttt catggtcctg gagccagtgg ccaggcagct 720  
gccaattggc tagcaggatt tggaaggggt cccacaccac ccaccttgct gggcatcagg 780  
caaaatgcaa acaccacagg cagaagaagg ctattggtct tagacgagtt caaaatggag 840  
aaaagaatca gcagaatgtt ctatataatg acttttctgt ttctaacctt gtggggcccc 900  
tacctgggtg cctgttattg gagagttttt gcaagagggc ctgtagtacc agggggattt 960  
ctaacagctg ctgtctggat gagttttgcc caagcaggaa tcaatccttt tgtctgcatt 1020  
ttctcaaaca gggagctgag gcgctgtttc agcacaaccc ttctttactg cagaaaatcc 1080  
aggttaccaa gggaacctta ctgtgttata tga 1113

<210> 28  
<211> 370  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 28

```

Met Ala Asn Tyr Ser His Ala Ala Asp Asn Ile Leu Gln Asn Leu Ser
1      5      10      15
Pro Leu Thr Ala Phe Leu Lys Leu Thr Ser Leu Gly Phe Ile Ile Gly
20      25      30
Val Ser Val Val Gly Asn Leu Leu Ile Ser Ile Leu Leu Val Lys Asp
35      40      45
Lys Thr Leu His Arg Ala Pro Tyr Tyr Phe Leu Leu Asp Leu Cys Cys
50      55      60
Ser Asp Ile Leu Arg Ser Ala Ile Cys Phe Pro Phe Val Phe Asn Ser
65      70      75      80
Val Lys Asn Gly Ser Thr Trp Thr Tyr Gly Thr Leu Thr Cys Lys Val
85      90      95
Ile Ala Phe Leu Gly Val Leu Ser Cys Phe His Thr Ala Phe Met Leu
100     105
Phe Cys Ile Ser Val Thr Arg Tyr Leu Ala Ile Ala His His Arg Phe
115     120     125
Tyr Thr Lys Arg Leu Thr Phe Trp Thr Cys Leu Ala Val Ile Cys Met
130     135     140
Val Trp Thr Leu Ser Val Ala Met Ala Phe Pro Pro Val Leu Asp Val
145     150     155     160
Gly Thr Tyr Ser Phe Ile Arg Glu Glu Asp Gln Cys Thr Phe Gln His
165     170     175
Arg Ser Phe Arg Ala Asn Asp Ser Leu Gly Phe Met Leu Leu Leu Ala
180     185     190
Leu Ile Leu Leu Ala Thr Gln Leu Val Tyr Leu Lys Leu Ile Phe Phe
195     200     205
Val His Asp Arg Arg Lys Met Lys Pro Val Gln Phe Val Ala Ala Val
210     215     220
Ser Gln Asn Trp Thr Phe His Gly Pro Gly Ala Ser Gly Gln Ala Ala
225     230     235     240
Ala Asn Trp Leu Ala Gly Phe Gly Arg Gly Pro Thr Pro Pro Thr Leu
245     250     255
Leu Gly Ile Arg Gln Asn Ala Asn Thr Thr Gly Arg Arg Arg Leu Leu
260     265     270
Val Leu Asp Glu Phe Lys Met Glu Lys Arg Ile Ser Arg Met Phe Tyr
275     280     285
Ile Met Thr Phe Leu Phe Leu Thr Leu Trp Gly Pro Tyr Leu Val Ala
290     295     300
Cys Tyr Trp Arg Val Phe Ala Arg Gly Pro Val Val Pro Gly Gly Phe
305     310     315     320
Leu Thr Ala Ala Val Trp Met Ser Phe Ala Gln Ala Gly Ile Asn Pro
325     330     335

```

## Aren0054.ST25.txt

Phe Val Cys Ile Phe Ser Asn Arg Glu Leu Arg Arg Cys Phe Ser Thr  
 340 345 350

Thr Leu Leu Tyr Cys Arg Lys Ser Arg Leu Pro Arg Glu Pro Tyr Cys  
 355 360 365

Val Ile  
 370

<210> 29  
 <211> 1080  
 <212> DNA  
 <213> Homo sapiens

<400> 29  
 atgcaggtcc cgaacagcac cggcccggac aacgcgacgc tgcagatgct gcggaacccg 60  
 gcgcatcgagg tggccctgcc cgtggtgtac tcgctggtgg cggcggtcag catcccgggc 120  
 aacctcttct ctctgtgggt gctgtgccgg cgcattgggg ccagatcccc gtccgtcatc 180  
 ttcattgatca acctgagcgt caccgacctg atgctggcca gcgtgttgcc tttccaaatc 240  
 tactaccatt gcaaccgcca ccaactggga ttccgggtgc tgctttgcaa cgtggtgacc 300  
 gtggcctttt acgcaaaca gtattccagc atctcacca tgacctgtat cagcgtggag 360  
 cgcttctctg gggtcctgta cccgctcagc tccaagcgt ggcgccgcgc tcgttacgcg 420  
 gtggccgcgt gtgcagggac ctggctgctg ctctgaccg ccctgtgcc gctggcgcg 480  
 accgatctca cctaccgggt gacgcacctg ggcattcatc cctgcttcca cgtcctcaag 540  
 tggacgatgc tccccagcgt ggccatgtgg gccgtgttcc tcttcacat ctctatcctg 600  
 ctgttctca tcccgctcgt gatcaccgtg gcttggtaca cggccaccat cctcaagctg 660  
 ttgcgcacgg aggaggcgca cggccgggag cagcggaggc gcgcggtggg cctggccgcg 720  
 gtggtcttgc tggcctttgt cacctgttc gccccaaca acttcgtgct cctggcgcac 780  
 atcgtgagcc gcctgttcta cggcaagagc tactaccagc tgtacaagct cagctgtgt 840  
 ctcatctgcc tcaacaactg tctggacctg tttgtttatt actttgcgtc ccgggaattc 900  
 cagctgcgcc tgcgggaata tttgggctgc cgcgggtgc ccagagacac cctggacacg 960  
 cgccgcgaga gcctcttctc cgccaggacc acgtccgtgc gctccgaggc cgggtgcgcac 1020  
 cctgaaggga tggagggagc caccaggccc ggctccaga ggcaggagag tgtgttctga 1080

<210> 30  
 <211> 359  
 <212> PRT  
 <213> Homo sapiens

<400> 30

Met Gln Val Pro Asn Ser Thr Gly Pro Asp Asn Ala Thr Leu Gln Met  
 1 5 10 15

Leu Arg Asn Pro Ala Ile Ala Val Ala Leu Pro Val Val Tyr Ser Leu  
 20 25 30

## Aren0054.ST25.txt

Val Ala Ala Val Ser Ile Pro Gly Asn Leu Phe Ser Leu Trp Val Leu  
 35 40 45  
 Cys Arg Arg Met Gly Pro Arg Ser Pro Ser Val Ile Phe Met Ile Asn  
 50 55 60  
 Leu Ser Val Thr Asp Leu Met Leu Ala Ser Val Leu Pro Phe Gln Ile  
 65 70 75 80  
 Tyr Tyr His Cys Asn Arg His His Trp Val Phe Gly Val Leu Leu Cys  
 85 90 95  
 Asn Val Val Thr Val Ala Phe Tyr Ala Asn Met Tyr Ser Ser Ile Leu  
 100 105 110  
 Thr Met Thr Cys Ile Ser Val Glu Arg Phe Leu Gly Val Leu Tyr Pro  
 115 120 125  
 Leu Ser Ser Lys Arg Trp Arg Arg Arg Tyr Ala Val Ala Ala Cys  
 130 135 140  
 Ala Gly Thr Trp Leu Leu Leu Thr Ala Leu Cys Pro Leu Ala Arg  
 145 150 155 160  
 Thr Asp Leu Thr Tyr Pro Val His Ala Leu Gly Ile Ile Thr Cys Phe  
 165 170 175  
 Asp Val Leu Lys Trp Thr Met Leu Pro Ser Val Ala Met Trp Ala Val  
 180 185 190  
 Phe Leu Phe Thr Ile Phe Ile Leu Leu Phe Leu Ile Pro Phe Val Ile  
 195 200 205  
 Thr Val Ala Cys Tyr Thr Ala Thr Ile Leu Lys Leu Leu Arg Thr Glu  
 210 215 220  
 Glu Ala His Gly Arg Glu Gln Arg Arg Arg Ala Val Gly Leu Ala Ala  
 225 230 235 240  
 Val Val Leu Leu Ala Phe Val Thr Cys Phe Ala Pro Asn Asn Phe Val  
 245 250 255  
 Leu Leu Ala His Ile Val Ser Arg Leu Phe Tyr Gly Lys Ser Tyr Tyr  
 260 265 270  
 His Val Tyr Lys Leu Thr Leu Cys Leu Ser Cys Leu Asn Asn Cys Leu  
 275 280 285  
 Asp Pro Phe Val Tyr Tyr Phe Ala Ser Arg Glu Phe Gln Leu Arg Leu  
 290 295 300  
 Arg Glu Tyr Leu Gly Cys Arg Arg Val Pro Arg Asp Thr Leu Asp Thr  
 305 310 315 320  
 Arg Arg Glu Ser Leu Phe Ser Ala Arg Thr Thr Ser Val Arg Ser Glu  
 325 330 335  
 Ala Gly Ala His Pro Glu Gly Met Glu Gly Ala Thr Arg Pro Gly Leu  
 340 345 350  
 Gln Arg Gln Glu Ser Val Phe  
 355

<210> 31  
 <211> 1503

## Aren0054.ST25.txt

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 31

```

atggagcgtc cctgggagga cagcccaggc ccggaggggg cagctgaggg ctgcctgtg      60
ccagtcgccg cgggggcgag ctccggtgcc gcggcgagtg gcacaggctg gcagccatgg      120
gctgagtgcc cgggacccaa ggggaggggg caactgctgg cgaccgccgg ccctttgcgt      180
cgctggcccg cccctcgcc tgcagctcc agccccgcc ccggagcggc gtccgctcac      240
tcggttcaag gcagcgcgac tgcgggtggc gcacgaccag ggcgcagacc ttggggcgcg      300
cggcccatgg agtcgggggt gctgcggccg gcgcgggtga gcgaggtcat cgtcctgcat      360
tacaactaca ccggcaagct ccgcggtgag agctaccagc cgggtgccgg cctgcgcgcc      420
gacgccgtgg tgtgcttggc ggtgtgcgcc ttcactgtgc tagagaatct agccgtgttg      480
ttggtgctcg gacgccaccc gcgcttcac gtcoccatgt tctgtctcct gggcagcctc      540
acgttgtcgg atctgctggc aggcgcgcgc tacgcgcgca acatcctact gtcggggccg      600
ctcacgtga aactgtcccc cgcgctctgg ttgcacggg agggagcggt cttcgtggca      660
ctcactgctg cgtgctgag cctcctggcc atcgcgctgg agcgcagcct caccatggcg      720
cgcagggggc ccgcgcccg tccagtcgg ggcgcacgc tggcgatggc agccgcggcc      780
tggggcggtg cgctgctcct cgggctcctg ccagcgctgg gctggaattg cctgggtcgc      840
ctggacgctt gctccactgt cttgcgcctc tacgccaagg cctacgtgct cttctgcgtg      900
ctgccttcg tgggcatcct ggccgcgac tgtgactct acgcgcgcat ctactgccag      960
gtacgcgcca acgcgcggc cctgccggca cggcccgga ctgcggggac cacctcgacc      1020
cgggcgcgtc gcaagccgag ctctctggcc ttgctgcgca cgctcagcgt ggtgctcctg      1080
gcctttgtgg catgttgggg cccctcttcc ctgctgctgt tgctcgacgt ggcgtgcccg      1140
gcgcgcacct gtcctgtact cctgcaggcc gatcccttcc tgggactggc catggccaac      1200
tcacttctga acccatcat ctacacgctc accaaccgag acctgcgcca cgcgctcctg      1260
cgcctggtct gctgcggacg ccactcctgc ggcagagacc cgagtggctc ccagcagtcg      1320
gcgagcgcgg ctgaggcttc cgggggcctg cgccgctgcc tgccccggg cttgatggg      1380
agcttcagcg gctcggagcg ctcatcgccc cagcgcgacg ggetggacac cagcggctcc      1440
acaggcagcc ccggtgcacc cacagccgcc cggactctgg tatcagaacc ggctgcagac      1500
tga                                                                 1503

```

&lt;210&gt; 32

&lt;211&gt; 500

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 32

Met Glu Arg Pro Trp Glu Asp Ser Pro Gly Pro Glu Gly Ala Ala Glu

```

1           5           10           15
Gly Ser Pro Val Pro Val Ala Ala Gly Ala Arg Ser Gly Ala Ala Ala
20           25           30
Ser Gly Thr Gly Trp Gln Pro Trp Ala Glu Cys Pro Gly Pro Lys Gly
35           40           45
Arg Gly Gln Leu Leu Ala Thr Ala Gly Pro Leu Arg Arg Trp Pro Ala
50           55           60
Pro Ser Pro Ala Ser Ser Ser Pro Ala Pro Gly Ala Ala Ser Ala His
65           70           75           80
Ser Val Gln Gly Ser Ala Thr Ala Gly Gly Ala Arg Pro Gly Arg Arg
85           90           95
Pro Trp Gly Ala Arg Pro Met Glu Ser Gly Leu Leu Arg Pro Ala Pro
100          105          110
Val Ser Glu Val Ile Val Leu His Tyr Asn Tyr Thr Gly Lys Leu Arg
115          120          125
Gly Ala Ser Tyr Gln Pro Gly Ala Gly Leu Arg Ala Asp Ala Val Val
130          135          140
Cys Leu Ala Val Cys Ala Phe Ile Val Leu Glu Asn Leu Ala Val Leu
145          150          155          160
Leu Val Leu Gly Arg His Pro Arg Phe His Ala Pro Met Phe Leu Leu
165          170          175
Leu Gly Ser Leu Thr Leu Ser Asp Leu Leu Ala Gly Ala Ala Tyr Ala
180          185          190
Ala Asn Ile Leu Leu Ser Gly Pro Leu Thr Leu Lys Leu Ser Pro Ala
195          200          205
Leu Trp Phe Ala Arg Glu Gly Gly Val Phe Val Ala Leu Thr Ala Ser
210          215          220
Val Leu Ser Leu Leu Ala Ile Ala Leu Glu Arg Ser Leu Thr Met Ala
225          230          235          240
Arg Arg Gly Pro Ala Pro Val Ser Ser Arg Gly Arg Thr Leu Ala Met
245          250          255
Ala Ala Ala Ala Trp Gly Val Ser Leu Leu Leu Gly Leu Leu Pro Ala
260          265          270
Leu Gly Trp Asn Cys Leu Gly Arg Leu Asp Ala Cys Ser Thr Val Leu
275          280          285
Pro Leu Tyr Ala Lys Ala Tyr Val Leu Phe Cys Val Leu Ala Phe Val
290          295          300
Gly Ile Leu Ala Ala Ile Cys Ala Leu Tyr Ala Arg Ile Tyr Cys Gln
305          310          315          320
Val Arg Ala Asn Ala Arg Arg Leu Pro Ala Arg Pro Gly Thr Ala Gly
325          330          335
Thr Thr Ser Thr Arg Ala Arg Arg Lys Pro Arg Ser Leu Ala Leu Leu
340          345          350

```

## Aren0054.ST25.txt

Arg Thr Leu Ser Val Val Leu Leu Ala Phe Val Ala Cys Trp Gly Pro  
355 360 365

Leu Phe Leu Leu Leu Leu Leu Asp Val Ala Cys Pro Ala Arg Thr Cys  
370 375 380

Pro Val Leu Leu Gln Ala Asp Pro Phe Leu Gly Leu Ala Met Ala Asn  
385 390 395 400

Ser Leu Leu Asn Pro Ile Ile Tyr Thr Leu Thr Asn Arg Asp Leu Arg  
405 410 415

His Ala Leu Leu Arg Leu Val Cys Cys Gly Arg His Ser Cys Gly Arg  
420 425 430

Asp Pro Ser Gly Ser Gln Gln Ser Ala Ser Ala Ala Glu Ala Ser Gly  
435 440 445

Gly Leu Arg Arg Cys Leu Pro Pro Gly Leu Asp Gly Ser Phe Ser Gly  
450 455 460

Ser Glu Arg Ser Ser Pro Gln Arg Asp Gly Leu Asp Thr Ser Gly Ser  
465 470 475 480

Thr Gly Ser Pro Gly Ala Pro Thr Ala Ala Arg Thr Leu Val Ser Glu  
485 490 495

Pro Ala Ala Asp  
500

<210> 33

<211> 1029

<212> DNA

<213> Homo sapiens

<400> 33

atgcaagccg tgcacaatct cacctctgcg cctgggaaca ccagtctgtg caccagagac 60

tacaaaatca cccaggtcct ctccactg ctctacactg tcctgttttt tgttgacttt 120

atcacaaatg gcctggcgat gaggattttc tttcaaatcc ggagtaaadc aaactttatt 180

atttttctta agaacacagt cattttctgat ctctcatga ttctgacttt tccattcaaa 240

attcttagtg atgccaaact gggaacagga cactgagaa cttttgtgtg tcaagttacc 300

tccgtcatat tttatttcac aatgtatatc agtatttcat tcctgggact gataactatc 360

gatcgctacc agaagaccac caggccattt aaaacatcca acccaaaaaa tctcttgggg 420

gctaagattc tctctgttgt catctgggca ttcatgttct tactctcttt gcctaacatg 480

attctgacca acaggcagcc gagagacaag aatgtgaaga aatgctcttt ccttaaatca 540

gagttcggtc tagtctggca tgaaatagta aattacatct gtcaagtcatt tttctggatt 600

aatttcttaa ttgttattgt atgttatata ctattacaa aagaactgta ccggtcatac 660

gtaagaacga ggggtgtagg taaagtcccc aggaaaaagg tgaacgtcaa agttttcatt 720

atcattgctg tattctttat ttgttttgtt cctttccatt ttgccgaat tccttacacc 780

ctgagccaaa cccgggatgt ctttgactgc actgctgaaa atactctgtt ctatgtgaaa 840

gagagcactc tgtggttaac ttccttaaat gcatgcctgg atccgttcat ctattttttc 900



```

ctttgcaagt ccttcagaaa ttccttgata agtatgctga agtgcccaaa ttctgcaaca    960
tctctgtccc aggacaatag gaaaaaagaa caggatggtg gtgacccaaa tgaagagact    1020
ccaatgtaa                                                                    1029

```

```

<210> 34
<211> 342
<212> PRT
<213> Homo sapiens

```

```
<400> 34
```

```
Met Gln Ala Val Asp Asn Leu Thr Ser Ala Pro Gly Asn Thr Ser Leu
1          5          10          15
```

```
Cys Thr Arg Asp Tyr Lys Ile Thr Gln Val Leu Phe Pro Leu Leu Tyr
          20          25          30
```

```
Thr Val Leu Phe Phe Val Gly Leu Ile Thr Asn Gly Leu Ala Met Arg
          35          40          45
```

```
Ile Phe Phe Gln Ile Arg Ser Lys Ser Asn Phe Ile Ile Phe Leu Lys
50          55          60
```

```
Asn Thr Val Ile Ser Asp Leu Leu Met Ile Leu Thr Phe Pro Phe Lys
65          70          75          80
```

```
Ile Leu Ser Asp Ala Lys Leu Gly Thr Gly Pro Leu Arg Thr Phe Val
          85          90          95
```

```
Cys Gln Val Thr Ser Val Ile Phe Tyr Phe Thr Met Tyr Ile Ser Ile
100          105          110
```

```
Ser Phe Leu Gly Leu Ile Thr Ile Asp Arg Tyr Gln Lys Thr Thr Arg
115          120          125
```

```
Pro Phe Lys Thr Ser Asn Pro Lys Asn Leu Leu Gly Ala Lys Ile Leu
130          135          140
```

```
Ser Val Val Ile Trp Ala Phe Met Phe Leu Leu Ser Leu Pro Asn Met
145          150          155          160
```

```
Ile Leu Thr Asn Arg Gln Pro Arg Asp Lys Asn Val Lys Lys Cys Ser
165          170          175
```

```
Phe Leu Lys Ser Glu Phe Gly Leu Val Trp His Glu Ile Val Asn Tyr
180          185          190
```

```
Ile Cys Gln Val Ile Phe Trp Ile Asn Phe Leu Ile Val Ile Val Cys
195          200          205
```

```
Tyr Thr Leu Ile Thr Lys Glu Leu Tyr Arg Ser Tyr Val Arg Thr Arg
210          215          220
```

```
Gly Val Gly Lys Val Pro Arg Lys Lys Val Asn Val Lys Val Phe Ile
225          230          235          240
```

```
Ile Ile Ala Val Phe Phe Ile Cys Phe Val Pro Phe His Phe Ala Arg
245          250          255
```

```
Ile Pro Tyr Thr Leu Ser Gln Thr Arg Asp Val Phe Asp Cys Thr Ala
260          265          270
```

Aren0054.ST25.txt

Glu Asn Thr Leu Phe Tyr Val Lys Glu Ser Thr Leu Trp Leu Thr Ser  
 275 280 285  
 Leu Asn Ala Cys Leu Asp Pro Phe Ile Tyr Phe Phe Leu Cys Lys Ser  
 290 295 300  
 Phe Arg Asn Ser Leu Ile Ser Met Leu Lys Cys Pro Asn Ser Ala Thr  
 305 310 315 320  
 Ser Leu Ser Gln Asp Asn Arg Lys Lys Glu Gln Asp Gly Gly Asp Pro  
 325 330 335  
 Asn Glu Glu Thr Pro Met  
 340

<210> 35  
 <211> 1077  
 <212> DNA  
 <213> Homo sapiens

<400> 35  
 atgtcgggtct gctaccgtcc cccaggaac gagacactgc tgagctggaa gacttcgcgg 60  
 gccacaggca cagccttcct gctgctggcg gcgctgctgg ggetgcctgg caacggcttc 120  
 gtggtgtgga gcttggcggg ctggcgccct gcacgggggc gaccgctggc ggccacgctt 180  
 gtgctgcacc tggcgctggc cgacggcgcg gtgctgctgc tcacgccgct ctttgtggcc 240  
 ttctgaccc ggcaggcctg gccgctgggc caggcgggct gcaaggcggg gtactacgtg 300  
 tgcgcgctca gcatgtacgc cagcgtgctg ctcaccggcc tgctcagcct gcagcgctgc 360  
 ctgcagtc aacggccctt cctggcgctt cggtgctgca gcccgccctt ggcccgccgc 420  
 ctgctgctgg cggctctggc ggccgccctg ttgctcgccg tcccgccgc cgtctaccgc 480  
 cacctgtgga gggaccgct atgccagctg tgccaccgt cgcgggtcca cgccgcgcgc 540  
 cacctgagcc tggagactct gaccgcttct gtgcttctt tcgggctgat gctcggtgctgc 600  
 tacagcgtga cgctggcacg gctgcggggc gcccgctggg gctccgggcg gcacggggcg 660  
 cgggtggggc ggctggtgag cgccatcgct cttgccttcg gcttgctctg ggccccctac 720  
 cacgcagtca accttctgca ggcggtcgca gcgctggctc caccggaagg ggccttggcg 780  
 aagctgggcg gagccggcca ggcggcgca gcgggaacta cggccttggc cttcttcagt 840  
 tctagcgtca acccggtgct ctacgtcttc accgctggag atctgctgcc ccgggcaggt 900  
 cccgctttcc tcacgcggct cttcgaaggc tctggggagg cccgagggg cgccgctct 960  
 agggaaggga ccatggagct ccgaactacc cctcagctga aagtgggtgg gcagggccgc 1020  
 ggcaatggag acccgggggg tgggatggag aaggacggtc cggaatggga cttttga 1077

<210> 36  
 <211> 358  
 <212> PRT  
 <213> Homo sapiens

<400> 36

```

Met Ser Val Cys Tyr Arg Pro Pro Gly Asn Glu Thr Leu Leu Ser Trp
1      5      10      15
Lys Thr Ser Arg Ala Thr Gly Thr Ala Phe Leu Leu Leu Ala Ala Leu
20      25      30
Leu Gly Leu Pro Gly Asn Gly Phe Val Val Trp Ser Leu Ala Gly Trp
35      40      45
Arg Pro Ala Arg Gly Arg Pro Leu Ala Ala Thr Leu Val Leu His Leu
50      55      60
Ala Leu Ala Asp Gly Ala Val Leu Leu Leu Thr Pro Leu Phe Val Ala
65      70      75      80
Phe Leu Thr Arg Gln Ala Trp Pro Leu Gly Gln Ala Gly Cys Lys Ala
85      90      95
Val Tyr Tyr Val Cys Ala Leu Ser Met Tyr Ala Ser Val Leu Leu Thr
100     105     110
Gly Leu Leu Ser Leu Gln Arg Cys Leu Ala Val Thr Arg Pro Phe Leu
115     120     125
Ala Pro Arg Leu Arg Ser Pro Ala Leu Ala Arg Arg Leu Leu Leu Ala
130     135     140
Val Trp Leu Ala Ala Leu Leu Leu Ala Val Pro Ala Ala Val Tyr Arg
145     150     155     160
His Leu Trp Arg Asp Arg Val Cys Gln Leu Cys His Pro Ser Pro Val
165     170     175
His Ala Ala Ala His Leu Ser Leu Glu Thr Leu Thr Ala Phe Val Leu
180     185     190
Pro Phe Gly Leu Met Leu Gly Cys Tyr Ser Val Thr Leu Ala Arg Leu
195     200     205
Arg Gly Ala Arg Trp Gly Ser Gly Arg His Gly Ala Arg Val Gly Arg
210     215     220
Leu Val Ser Ala Ile Val Leu Ala Phe Gly Leu Leu Trp Ala Pro Tyr
225     230     235     240
His Ala Val Asn Leu Leu Gln Ala Val Ala Ala Leu Ala Pro Pro Glu
245     250     255
Gly Ala Leu Ala Lys Leu Gly Gly Ala Gly Gln Ala Ala Arg Ala Gly
260     265     270
Thr Thr Ala Leu Ala Phe Phe Ser Ser Ser Val Asn Pro Val Leu Tyr
275     280     285
Val Phe Thr Ala Gly Asp Leu Leu Pro Arg Ala Gly Pro Arg Phe Leu
290     295     300
Thr Arg Leu Phe Glu Gly Ser Gly Glu Ala Arg Gly Gly Gly Arg Ser
305     310     315     320
Arg Glu Gly Thr Met Glu Leu Arg Thr Thr Pro Gln Leu Lys Val Val
325     330     335
Gly Gln Gly Arg Gly Asn Gly Asp Pro Gly Gly Gly Met Glu Lys Asp

```

340

345

350

Gly Pro Glu Trp Asp Leu  
355

<210> 37  
<211> 1005  
<212> DNA  
<213> Homo sapiens

<400> 37  
atgctgggga tcatggcatg gaatgcaact tgcaaaaact ggctggcagc agaggctgcc 60  
ctggaaaagt actacctttc ctttttttat gggattgagt tcgttggtggg agtccttgga 120  
aataccattg ttgtttacgg ctacatcttc tctctgaaga actggaacag cagtaatatt 180  
tatctcttta acctctctgt ctctgactta gcttttctgt gcacctccc catgctgata 240  
aggagttatg ccaatggaaa ctggatatat ggagacgtgc tctgcataag caaccgatat 300  
gtgcttcattg ccaacctcta taccagcatt ctctttctca cttttatcag catagatcga 360  
tacttgataa ttaagtatcc tttccgagaa caccttctgc aaaagaaaga gtttgctatt 420  
ttaatctcct tggccatttg ggttttagta accttagagt tactacccat acttcccctt 480  
ataaatcctg ttataactga caatggcacc acctgtaatg attttgcaag ttctggagac 540  
cccaactaca acctcattta cagcatgtgt ctaacactgt tggggttcct tattcctctt 600  
tttgatgatg gtttctttta ttacaagatt gctctcttcc taaagcagag gaataggcag 660  
gttgctactg ctctgcccct tgaaaagcct ctcaacttgg tcatcatggc agtggtaatc 720  
ttctctgtgc tttttacacc ctatcacgtc atgcggaatg tgaggatcgc ttcacgcctg 780  
gggagttgga agcagtatca gtgcactcag gtcgtcatca actcctttta cattgtgaca 840  
cggccttttg cctttctgaa cagtgtcatc aaccctgtct tctattttct tttgggagat 900  
catttcaggg acatgctgat gaatcaactg agacacaact tcaaatccct tacatccttt 960  
agcagatggg ctcatgaact cctactttca ttcagagaaa agtga 1005

<210> 38  
<211> 334  
<212> PRT  
<213> Homo sapiens

<400> 38

Met Leu Gly Ile Met Ala Trp Asn Ala Thr Cys Lys Asn Trp Leu Ala  
1 5 10 15  
Ala Glu Ala Ala Leu Glu Lys Tyr Tyr Leu Ser Ile Phe Tyr Gly Ile  
20 25 30  
Glu Phe Val Val Gly Val Leu Gly Asn Thr Ile Val Val Tyr Gly Tyr  
35 40 45  
Ile Phe Ser Leu Lys Asn Trp Asn Ser Ser Asn Ile Tyr Leu Phe Asn  
50 55 60

## Aren0054.ST25.txt

Leu Ser Val Ser Asp Leu Ala Phe Leu Cys Thr Leu Pro Met Leu Ile  
65 70 75 80

Arg Ser Tyr Ala Asn Gly Asn Trp Ile Tyr Gly Asp Val Leu Cys Ile  
85 90 95

Ser Asn Arg Tyr Val Leu His Ala Asn Leu Tyr Thr Ser Ile Leu Phe  
100 105 110

Leu Thr Phe Ile Ser Ile Asp Arg Tyr Leu Ile Ile Lys Tyr Pro Phe  
115 120 125

Arg Glu His Leu Leu Gln Lys Lys Glu Phe Ala Ile Leu Ile Ser Leu  
130 135 140

Ala Ile Trp Val Leu Val Thr Leu Glu Leu Leu Pro Ile Leu Pro Leu  
145 150 155 160

Ile Asn Pro Val Ile Thr Asp Asn Gly Thr Thr Cys Asn Asp Phe Ala  
165 170 175

Ser Ser Gly Asp Pro Asn Tyr Asn Leu Ile Tyr Ser Met Cys Leu Thr  
180 185 190

Leu Leu Gly Phe Leu Ile Pro Leu Phe Val Met Cys Phe Phe Tyr Tyr  
195 200 205

Lys Ile Ala Leu Phe Leu Lys Gln Arg Asn Arg Gln Val Ala Thr Ala  
210 215 220

Leu Pro Leu Glu Lys Pro Leu Asn Leu Val Ile Met Ala Val Val Ile  
225 230 235 240

Phe Ser Val Leu Phe Thr Pro Tyr His Val Met Arg Asn Val Arg Ile  
245 250 255

Ala Ser Arg Leu Gly Ser Trp Lys Gln Tyr Gln Cys Thr Gln Val Val  
260 265 270

Ile Asn Ser Phe Tyr Ile Val Thr Arg Pro Leu Ala Phe Leu Asn Ser  
275 280 285

Val Ile Asn Pro Val Phe Tyr Phe Leu Leu Gly Asp His Phe Arg Asp  
290 295 300

Met Leu Met Asn Gln Leu Arg His Asn Phe Lys Ser Leu Thr Ser Phe  
305 310 315 320

Ser Arg Trp Ala His Glu Leu Leu Leu Ser Phe Arg Glu Lys  
325 330

<210> 39

<211> 1296

<212> DNA

<213> Homo sapiens

<400> 39

atgcaggcgc ttaacattac cccggagcag ttctctcggc tgctgcggga ccacaacctg 60

acgcgggagc agttcatcgc tctgtaccgc ctgcgaccgc tcgtctacac cccagagctg 120

ccgggacgcg ccaagctggc cctcgtgctc accggcgtgc tcattcttcgc cctggcgctc 180

tttggcaatg ctctggtgtt ctacgtggtg accgcgagca aggccatgcg caccgtcacc 240

## Aren0054.ST25.txt

```

aacatcttta tctgctcctt ggcgctcagt gacctgctca tcaccttctt ctgcattccc 300
gtcaccatgc tccagaacat ttccgacaac tggtctgggg gtgctttcat ttgcaagatg 360
gtgccatttg tccagtctac cgctgttggt acagaaatgc tcaactatgac ctgcattgct 420
gtggaaaggc accagggact tgtgcatcct tttaaaatga agtggcaata caccaaccga 480
agggctttca caatgctagg tgtggtctgg ctggtggcag tcatcgtagg atcacccatg 540
tggcacgtgc aacaacttga gatcaaatat gacttcctat atgaaaagga acacatctgc 600
tgcttagaag agtggaccag cctgtgacac cagaagatct acaccacctt catccttgtc 660
atcctcttcc tctgcctctt tatggtgatg cttattctgt acagtaaaat tggttatgaa 720
ctttggataa agaaaagagt tggggatggt tcagtgttc gaactattca tggaaaagaa 780
atgtccaaaa tagccaggaa gaagaaacga gctgtcatta tgatggtgac agtgggtggct 840
ctctttgctg tgtgctgggc accattccat gttgtccata tgatgattga atacagtaat 900
tttggaaagg aatatgatga tgtcacaaac aagatgattt ttgctatcgt gcaaattatt 960
ggattttcca actccatctg taatcccatt gtctatgcat ttatgaatga aaacttcaaa 1020
aaaaatgttt tgtctgcagt ttgttattgc atagtaaata aaaccttctc tccagcacia 1080
aggcatggaa attcaggaat tacaatgatg cggaagaaag caaagttttc cctcagagag 1140
aatccagtgg aggaaaccaa aggagaagca ttcagtgatg gcaacattga agtcaaattg 1200
tgtgaacaga cagaggagaa gaaaaagctc aaacgacatc ttgctctctt taggtctgaa 1260
ctggctgaga attctccttt agacagtggg cattaa 1296

```

```

<210> 40
<211> 431
<212> PRT
<213> Homo sapiens

```

```
<400> 40
```

```

Met Gln Ala Leu Asn Ile Thr Pro Glu Gln Phe Ser Arg Leu Leu Arg
1          5          10         15
Asp His Asn Leu Thr Arg Glu Gln Phe Ile Ala Leu Tyr Arg Leu Arg
20        25        30
Pro Leu Val Tyr Thr Pro Glu Leu Pro Gly Arg Ala Lys Leu Ala Leu
35        40        45
Val Leu Thr Gly Val Leu Ile Phe Ala Leu Ala Leu Phe Gly Asn Ala
50        55        60
Leu Val Phe Tyr Val Val Thr Arg Ser Lys Ala Met Arg Thr Val Thr
65        70        75        80
Asn Ile Phe Ile Cys Ser Leu Ala Leu Ser Asp Leu Leu Ile Thr Phe
85        90        95
Phe Cys Ile Pro Val Thr Met Leu Gln Asn Ile Ser Asp Asn Trp Leu
100       105       110

```

Aren0054.ST25.txt

```

Gly Gly Ala Phe Ile Cys Lys Met Val Pro Phe Val Gln Ser Thr Ala
  115                      120                      125

Val Val Thr Glu Met Leu Thr Met Thr Cys Ile Ala Val Glu Arg His
  130                      135                      140

Gln Gly Leu Val His Pro Phe Lys Met Lys Trp Gln Tyr Thr Asn Arg
  145                      150                      155                      160

Arg Ala Phe Thr Met Leu Gly Val Val Trp Leu Val Ala Val Ile Val
                165                      170                      175

Gly Ser Pro Met Trp His Val Gln Gln Leu Glu Ile Lys Tyr Asp Phe
                180                      185                      190

Leu Tyr Glu Lys Glu His Ile Cys Cys Leu Glu Glu Trp Thr Ser Pro
                195                      200                      205

Val His Gln Lys Ile Tyr Thr Thr Phe Ile Leu Val Ile Leu Phe Leu
  210                      215                      220

Leu Pro Leu Met Val Met Leu Ile Leu Tyr Ser Lys Ile Gly Tyr Glu
  225                      230                      235                      240

Leu Trp Ile Lys Lys Arg Val Gly Asp Gly Ser Val Leu Arg Thr Ile
                245                      250                      255

His Gly Lys Glu Met Ser Lys Ile Ala Arg Lys Lys Lys Arg Ala Val
                260                      265                      270

Ile Met Met Val Thr Val Val Ala Leu Phe Ala Val Cys Trp Ala Pro
                275                      280                      285

Phe His Val Val His Met Met Ile Glu Tyr Ser Asn Phe Glu Lys Glu
  290                      295                      300

Tyr Asp Asp Val Thr Ile Lys Met Ile Phe Ala Ile Val Gln Ile Ile
  305                      310                      315                      320

Gly Phe Ser Asn Ser Ile Cys Asn Pro Ile Val Tyr Ala Phe Met Asn
                325                      330                      335

Glu Asn Phe Lys Lys Asn Val Leu Ser Ala Val Cys Tyr Cys Ile Val
                340                      345                      350

Asn Lys Thr Phe Ser Pro Ala Gln Arg His Gly Asn Ser Gly Ile Thr
                355                      360                      365

Met Met Arg Lys Lys Ala Lys Phe Ser Leu Arg Glu Asn Pro Val Glu
  370                      375                      380

Glu Thr Lys Gly Glu Ala Phe Ser Asp Gly Asn Ile Glu Val Lys Leu
  385                      390                      395                      400

Cys Glu Gln Thr Glu Glu Lys Lys Lys Leu Lys Arg His Leu Ala Leu
                405                      410                      415

Phe Arg Ser Glu Leu Ala Glu Asn Ser Pro Leu Asp Ser Gly His
                420                      425                      430

```

<210> 41  
 <211> 24  
 <212> DNA  
 <213> Artificial

&lt;220&gt;

&lt;223&gt; Novel Sequence

&lt;400&gt; 41

ctgtgtacag cagttcgag agtg

24

&lt;210&gt; 42

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Novel Sequence

&lt;400&gt; 42

gagtgccagg cagagcaggt agac

24

&lt;210&gt; 43

&lt;211&gt; 31

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Novel Sequence

&lt;400&gt; 43

cccgaattcc tgcttgctcc cagcttggcc c

31

&lt;210&gt; 44

&lt;211&gt; 32

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Novel Sequence

&lt;400&gt; 44

tgtggatcct gctgtcaaag gtccattcc gg

32

&lt;210&gt; 45

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Novel Sequence

&lt;400&gt; 45

tcacaatgct aggtgtggtc

20

&lt;210&gt; 46

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Novel Sequence

&lt;400&gt; 46

tgcatagaca atgggattac ag

22



<210> 47  
 <211> 511  
 <212> DNA  
 <213> Homo sapiens

<400> 47  
 tcacaatgct aggtgtggtc tggctggtgg cagtcacgt aggatcacc atgtggcacg 60  
 tgcaacaact tgagatcaaa tatgacttcc tatatgaaaa ggaacacatc tgctgcttag 120  
 aagagtggac cagccctgtg caccagaaga tctacaccac cttcatcctt gtcacacctt 180  
 tcctcctgcc tcttatgggtg atgcttattc tgtacgtaaa attgggtatg aactttggat 240  
 aaagaaaaga gttggggatg gttcagtgtc tcgaactatt catggaaaag aaatgtccaa 300  
 aatagccagg aagaagaaac gagctgtcat tatgatgggtg acagtgggtg ctctctttgc 360  
 tgtgtgctgg gcaccattcc atgttgtcca tatgatgatt gaatacagta attttgaaaa 420  
 ggaatatgat gatgtcacia tcaagatgat ttttctatc gtgcaaatta ttggattttc 480  
 caactccatc tgtaatccca ttgtctatgc a 511

<210> 48  
 <211> 21  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 48  
 ctgcttagaa gagtggacca g 21

<210> 49  
 <211> 22  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 49  
 ctgtgcacca gaagatctac ac 22

<210> 50  
 <211> 21  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 50  
 caaggatgaa ggtggtgtag a 21

<210> 51  
 <211> 23

<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 51  
gtgtagatct tctggtgcac agg 23

<210> 52  
<211> 21  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 52  
gcaatgcagg tcatagtgag c 21

<210> 53  
<211> 27  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 53  
tggagcatgg tgacgggaat gcagaag 27

<210> 54  
<211> 27  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 54  
gtgatgagca ggtcactgag cgccaag 27

<210> 55  
<211> 23  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 55  
gcaatgcagg cgcttaacat tac 23

<210> 56  
<211> 22  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 56  
ttgggttaca atctgaaggg ca 22

<210> 57  
<211> 23  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 57  
actccgtgtc cagcaggact ctg 23

<210> 58  
<211> 24  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 58  
tgcgtgttcc tggaccctca cgtg 24

<210> 59  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 59  
caggccttgg attttaatgt cagggatgg 29

<210> 60  
<211> 27  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 60  
ggagagtcag ctctgaaaga attcagg 27

<210> 61  
<211> 27  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 61  
tgatgtgatg ccagatacta atagcac 27

<210> 62  
 <211> 27  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 62  
 cctgattcat ttaggtgaga ttgagac

27

<210> 63  
 <211> 26  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 63  
 cccaagcttc cccaggtgta ttgat

26

<210> 64  
 <211> 26  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 64  
 gttggatcca cataatgcat tttctc

26

<210> 65  
 <211> 1080  
 <212> DNA  
 <213> Homo sapiens

<400> 65  
 atgattctca actctttctac tgaagatggt attaaaagaa tccaagatga ttgtcccaaa 60  
 gctggaaggc ataattacat atttgtcatg attcctactt tatacagtat catcttttgtg 120  
 gtgggaatat ttggaaacag cttggtggtg atagtcattt acttttatat gaagctgaag 180  
 actgtggcca gtgtttttct tttgaattta gcaactggctg acttatgctt ttactgact 240  
 ttgccactat gggctgtcta cacagctatg gaataccgct ggccctttgg caattaccta 300  
 tgtaagattg cttcagccag cgtcagtttc aacctgtacg ctagtgtgtt tctactcacg 360  
 tgtctcagca ttgatcgata cctggctatt gttcacccaa tgaagtcccg ctttcgacgc 420  
 acaatgcttg tagccaaagt cacctgcac atcatttggc tgctggcagg cttggccagt 480  
 ttgccagcta taatccatcg aaatgtattt ttcatgaga acaccaatat tacagtttgt 540  
 gctttccatt atgagtccca aaattcaacc cttccgatag ggctgggcct gacaaaaaat 600  
 atactgggtt tcctgtttcc ttttctgatc attcttaca gttatactct tatttggaag 660  
 gccctaaaga aggcttatga aattcagaag aacaaaccaa gaaatgatga tatttttaag 720

```

ataattatgg caattgtgct tttctttttc ttttcttgga ttccccacca aatattcact 780
tttctggatg tattgattca actaggcatc atacgtgact gtagaattgc agatattgtg 840
gacacggcca tgcctatcac catttgtata gcttatttta acaattgcct gaatcctctt 900
ttttatggct ttctggggaa aaaattttaa agatattttc tccagcttct aaaatatatt 960
ccccaaaaag ccaaatccca ctcaaaccct tcaacaaaaa tgagcacgct ttcctaccgc 1020
ccctcagata atgtaagctc atccaccaag aagcctgcac catgttttga ggttgagtga 1080

```

```

<210> 66
<211> 359
<212> PRT
<213> Homo sapiens

```

```
<400> 66
```

```

Met Ile Leu Asn Ser Ser Thr Glu Asp Gly Ile Lys Arg Ile Gln Asp
1 5 10 15

```

```

Asp Cys Pro Lys Ala Gly Arg His Asn Tyr Ile Phe Val Met Ile Pro
20 25 30

```

```

Thr Leu Tyr Ser Ile Ile Phe Val Val Gly Ile Phe Gly Asn Ser Leu
35 40 45

```

```

Val Val Ile Val Ile Tyr Phe Tyr Met Lys Leu Lys Thr Val Ala Ser
50 55 60

```

```

Val Phe Leu Leu Asn Leu Ala Leu Ala Asp Leu Cys Phe Leu Leu Thr
65 70 75 80

```

```

Leu Pro Leu Trp Ala Val Tyr Thr Ala Met Glu Tyr Arg Trp Pro Phe
85 90 95

```

```

Gly Asn Tyr Leu Cys Lys Ile Ala Ser Ala Ser Val Ser Phe Asn Leu
100 105 110

```

```

Tyr Ala Ser Val Phe Leu Leu Thr Cys Leu Ser Ile Asp Arg Tyr Leu
115 120 125

```

```

Ala Ile Val His Pro Met Lys Ser Arg Leu Arg Arg Thr Met Leu Val
130 135 140

```

```

Ala Lys Val Thr Cys Ile Ile Ile Trp Leu Leu Ala Gly Leu Ala Ser
145 150 155 160

```

```

Leu Pro Ala Ile Ile His Arg Asn Val Phe Phe Ile Glu Asn Thr Asn
165 170 175

```

```

Ile Thr Val Cys Ala Phe His Tyr Glu Ser Gln Asn Ser Thr Leu Pro
180 185 190

```

```

Ile Gly Leu Gly Leu Thr Lys Asn Ile Leu Gly Phe Leu Phe Pro Phe
195 200 205

```

```

Leu Ile Ile Leu Thr Ser Tyr Thr Leu Ile Trp Lys Ala Leu Lys Lys
210 215 220

```

```

Ala Tyr Glu Ile Gln Lys Asn Lys Pro Arg Asn Asp Asp Ile Phe Lys
225 230 235 240

```

Aren0054.ST25.txt

Ile Ile Met Ala Ile Val Leu Phe Phe Phe Phe Ser Trp Ile Pro His  
245 250 255  
Gln Ile Phe Thr Phe Leu Asp Val Leu Ile Gln Leu Gly Ile Ile Arg  
260 265 270  
Asp Cys Arg Ile Ala Asp Ile Val Asp Thr Ala Met Pro Ile Thr Ile  
275 280 285  
Cys Ile Ala Tyr Phe Asn Asn Cys Leu Asn Pro Leu Phe Tyr Gly Phe  
290 295 300  
Leu Gly Lys Lys Phe Lys Arg Tyr Phe Leu Gln Leu Leu Lys Tyr Ile  
305 310 315 320  
Pro Pro Lys Ala Lys Ser His Ser Asn Leu Ser Thr Lys Met Ser Thr  
325 330 335  
Leu Ser Tyr Arg Pro Ser Asp Asn Val Ser Ser Ser Thr Lys Lys Pro  
340 345 350

Ala Pro Cys Phe Glu Val Glu  
355

<210> 67  
<211> 27  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 67  
accatgggca gccoctggaa cggcagc

27

<210> 68  
<211> 39  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 68  
agaaccacca ccagcaggac gcggacggtc tgccggtgg

39

<210> 69  
<211> 39  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 69  
gtccgcgtcc tgctggtggt ggttctggca tttataatt

39

<210> 70  
<211> 33  
<212> DNA  
<213> Artificial

&lt;220&gt;

&lt;223&gt; Novel Sequence

&lt;400&gt; 70

cctggatcct tatcccatcg ttttcacgtt agc

33

&lt;210&gt; 71

&lt;211&gt; 26

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Novel Sequence

&lt;400&gt; 71

ctggaattct cctgccagca tgggtga

26

&lt;210&gt; 72

&lt;211&gt; 30

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Novel Sequence

&lt;400&gt; 72

gcaggatcct atattgcgtg ctctgtcccc

30

&lt;210&gt; 73

&lt;211&gt; 999

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 73

atggtgaact ccaccacacg tgggatgcac acttctctgc acctctggaa ccgcagcagt 60

tacagactgc acagcaatgc cagtgagtcc cttggaaaag gctactctga tggaggggtgc 120

tacgagcaac tttttgtctc tcctgaggtg tttgtgactc tgggtgtcat cagcttggtg 180

gagaatatct tagtgattgt ggcaatagcc aagaacaaga atctgcattc acccatgtac 240

tttttcatct gcagcttggc tgtggctgat atgctggtga gcgtttcaaa tggatcagaa 300

accattatca tcaccctatt aaacagtaca gatacggatg cacagagttt cacagtgaat 360

attgataatg tcattgactc ggtgatctgt agtccttgc ttgcatccat ttgcagcctg 420

ctttcaattg cagtggacag gtactttact atcttctatg ctctccagta ccataacatt 480

atgacagtta agcgggttgg gatcagcata agttgtatct gggcagcttg cacggtttca 540

ggcattttgt tcatcattta ctcatagatg agtgctgtca tcatctgcct catcaccatg 600

ttcttcacca tgctggctct catggcttct ctctatgtcc acatgttct gatggccagg 660

cttcacatta agaggattgc tgtcctcccc ggcactggtg ccatccgcca aggtgccaat 720

atgaagggag cgattacctt gaccatcctg attggcgtct ttgttgtctg ctgggcccc 780

ttcttctctc acttaatat ctacatctct tgtcctcaga atccatattg tgtgtgcttc 840

```

atgtctcact ttaacttgta tctcatactg atcatgtgta attcaatcat cgatcctctg 900
atttatgcac tccggagtca agaactgagg aaaaccttca aagagatcat ctgttgctat 960
cccctgggag gcctttgtga cttgtctage agatattaa 999

```

```

<210> 74
<211> 332
<212> PRT
<213> Homo sapiens

```

```
<400> 74
```

```

Met Val Asn Ser Thr His Arg Gly Met His Thr Ser Leu His Leu Trp
1          5          10          15
Asn Arg Ser Ser Tyr Arg Leu His Ser Asn Ala Ser Glu Ser Leu Gly
20          25          30
Lys Gly Tyr Ser Asp Gly Gly Cys Tyr Glu Gln Leu Phe Val Ser Pro
35          40          45
Glu Val Phe Val Thr Leu Gly Val Ile Ser Leu Leu Glu Asn Ile Leu
50          55          60
Val Ile Val Ala Ile Ala Lys Asn Lys Asn Leu His Ser Pro Met Tyr
65          70          75          80
Phe Phe Ile Cys Ser Leu Ala Val Ala Asp Met Leu Val Ser Val Ser
85          90          95
Asn Gly Ser Glu Thr Ile Ile Ile Thr Leu Leu Asn Ser Thr Asp Thr
100         105         110
Asp Ala Gln Ser Phe Thr Val Asn Ile Asp Asn Val Ile Asp Ser Val
115         120         125
Ile Cys Ser Ser Leu Leu Ala Ser Ile Cys Ser Leu Leu Ser Ile Ala
130         135         140
Val Asp Arg Tyr Phe Thr Ile Phe Tyr Ala Leu Gln Tyr His Asn Ile
145         150         155         160
Met Thr Val Lys Arg Val Gly Ile Ser Ile Ser Cys Ile Trp Ala Ala
165         170         175
Cys Thr Val Ser Gly Ile Leu Phe Ile Ile Tyr Ser Asp Ser Ser Ala
180         185         190
Val Ile Ile Cys Leu Ile Thr Met Phe Phe Thr Met Leu Ala Leu Met
195         200         205
Ala Ser Leu Tyr Val His Met Phe Leu Met Ala Arg Leu His Ile Lys
210         215         220
Arg Ile Ala Val Leu Pro Gly Thr Gly Ala Ile Arg Gln Gly Ala Asn
225         230         235         240
Met Lys Gly Ala Ile Thr Leu Thr Ile Leu Ile Gly Val Phe Val Val
245         250         255
Cys Trp Ala Pro Phe Phe Leu His Leu Ile Phe Tyr Ile Ser Cys Pro
260         265         270

```



Aren0054.ST25.txt

Gln Asn Pro Tyr Cys Val Cys Phe Met Ser His Phe Asn Leu Tyr Leu  
275 280 285

Ile Leu Ile Met Cys Asn Ser Ile Ile Asp Pro Leu Ile Tyr Ala Leu  
290 295 300

Arg Ser Gln Glu Leu Arg Lys Thr Phe Lys Glu Ile Ile Cys Cys Tyr  
305 310 315 320

Pro Leu Gly Gly Leu Cys Asp Leu Ser Ser Arg Tyr  
325 330

<210> 75  
<211> 32  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 75  
ccgaagcttc gagctgagta aggcggcgagg ct 32

<210> 76  
<211> 31  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 76  
gtggaattca ttgcccctgc ctcaaccccc a 31

<210> 77  
<211> 1344  
<212> DNA  
<213> Homo sapiens

<400> 77  
atggagctgc taaagctgaa ccggagcgtg cagggaaaccg gaccggggcc gggggcttcc 60  
ctgtgccgcc cggggggcgcc tctcctcaac agcagcagtg tgggcaacct cagctgcgag 120  
ccccctcgca ttccgggagc cgggacacga gaattggagc tggccattag aatcactctt 180  
tacgcagtga tcttctgat gaggcgttga ggaaatatgc tcatcatcgt ggtcctggga 240  
ctgagccgcc gcctgaggac tgcaccaat gccttctctc tctcactggc agtcagcgac 300  
ctctgtctgg ctgtggcttg catgcccttc accctctctc ccaatctcat gggcacattc 360  
atctttggca ccgtcatctg caaggcgggt tcctacctca tgggggtgtc tgtgagtgtg 420  
tccacgctaa gcctcgtggc catcgactg gaggatata gcgccatctg ccgaccactg 480  
caggcacgag tgtggcagac gcgctccac gcggctcgcg tgattgtagc cagctggctg 540  
ctgtccggac tactcatggt gccctacccc gtgtacactg tcgtgcaacc agtggggcct 600  
cgtgtgctgc agtgcgtgca tcgctggccc agtgcggggg tccgccagac ctgggtccgta 660

## Aren0054.ST25.txt

```

ctgctgcttc tgctcttgtt cttcatccca ggtgtggtta tggccgtggc ctacgggctt 720
atctctcgcg agctctactt agggcttcgc tttgacggcg acagtgcacg cgacagccaa 780
agcagggtcc gaaaccaagg cgggctgccg ggggctgttc accagaacgg gcgttgccgg 840
cctgagactg gcgcggttgg caaagacagc gatggctgct acgtgcaact tccacgttcc 900
cggcctgccc tggagctgac ggcgctgacg gctcctgggc cgggatccgg ctcccggccc 960
accaggcca agctgctggc taagaagcgc gtggtgcgaa tgttgctggt gatcgttgtg 1020
cttttttttc tgtgttggtt gccagtttat agtgccaaca cgtggcgcg ctttgatggc 1080
ccgggtgcac accgagcact ctgggtgct cctatctcct tcattcactt gctgagctac 1140
gcctcgccct gtgtcaacct cctggtctac tgcttcatgc accgtcgctt tcgccaggcc 1200
tgccctgaaa cttgcgctcg ctgctgcccc cggcctccac gagctcgccc cagggtcttt 1260
cccgatgagg accctccac tccctccatt gcttcgctgt ccaggcttag ctacaccacc 1320
atcagcacac tgggccctgg ctga 1344

```

```

<210> 78
<211> 447
<212> PRT
<213> Homo sapiens

```

```

<400> 78

```

```

Met Glu Leu Leu Lys Leu Asn Arg Ser Val Gln Gly Thr Gly Pro Gly
1          5          10          15
Pro Gly Ala Ser Leu Cys Arg Pro Gly Ala Pro Leu Leu Asn Ser Ser
          20          25          30
Ser Val Gly Asn Leu Ser Cys Glu Pro Pro Arg Ile Arg Gly Ala Gly
          35          40          45
Thr Arg Glu Leu Glu Leu Ala Ile Arg Ile Thr Leu Tyr Ala Val Ile
          50          55          60
Phe Leu Met Ser Val Gly Gly Asn Met Leu Ile Ile Val Val Leu Gly
65          70          75          80
Leu Ser Arg Arg Leu Arg Thr Val Thr Asn Ala Phe Leu Leu Ser Leu
          85          90          95
Ala Val Ser Asp Leu Leu Leu Ala Val Ala Cys Met Pro Phe Thr Leu
          100         105         110
Leu Pro Asn Leu Met Gly Thr Phe Ile Phe Gly Thr Val Ile Cys Lys
          115         120         125
Ala Val Ser Tyr Leu Met Gly Val Ser Val Ser Val Ser Thr Leu Ser
          130         135         140
Leu Val Ala Ile Ala Leu Glu Arg Tyr Ser Ala Ile Cys Arg Pro Leu
          145         150         155         160
Gln Ala Arg Val Trp Gln Thr Arg Ser His Ala Ala Arg Val Ile Val
          165         170         175

```

Aren0054.ST25.txt

Ala Thr Trp Leu Leu Ser Gly Leu Leu Met Val Pro Tyr Pro Val Tyr  
180 185 190

Thr Val Val Gln Pro Val Gly Pro Arg Val Leu Gln Cys Val His Arg  
195 200 205

Trp Pro Ser Ala Arg Val Arg Gln Thr Trp Ser Val Leu Leu Leu Leu  
210 215 220

Leu Leu Phe Phe Ile Pro Gly Val Val Met Ala Val Ala Tyr Gly Leu  
225 230 235 240

Ile Ser Arg Glu Leu Tyr Leu Gly Leu Arg Phe Asp Gly Asp Ser Asp  
245 250 255

Ser Asp Ser Gln Ser Arg Val Arg Asn Gln Gly Gly Leu Pro Gly Ala  
260 265 270

Val His Gln Asn Gly Arg Cys Arg Pro Glu Thr Gly Ala Val Gly Lys  
275 280 285

Asp Ser Asp Gly Cys Tyr Val Gln Leu Pro Arg Ser Arg Pro Ala Leu  
290 295 300

Glu Leu Thr Ala Leu Thr Ala Pro Gly Pro Gly Ser Gly Ser Arg Pro  
305 310 315 320

Thr Gln Ala Lys Leu Leu Ala Lys Lys Arg Val Val Arg Met Leu Leu  
325 330 335

Val Ile Val Val Leu Phe Phe Leu Cys Trp Leu Pro Val Tyr Ser Ala  
340 345 350

Asn Thr Trp Arg Ala Phe Asp Gly Pro Gly Ala His Arg Ala Leu Ser  
355 360 365

Val Ala Pro Ile Ser Phe Ile His Leu Leu Ser Tyr Ala Ser Ala Cys  
370 375 380

Val Asn Pro Leu Val Tyr Cys Phe Met His Arg Arg Phe Arg Gln Ala  
385 390 395 400

Cys Leu Glu Thr Cys Ala Arg Cys Cys Pro Arg Pro Pro Arg Ala Arg  
405 410 415

Pro Arg Ala Leu Pro Asp Glu Asp Pro Pro Thr Pro Ser Ile Ala Ser  
420 425 430

Leu Ser Arg Leu Ser Tyr Thr Thr Ile Ser Thr Leu Gly Pro Gly  
435 440 445

<210> 79  
<211> 30  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 79  
tgcaagctta aaaaggaaaa aatgaacagc

30

<210> 80  
<211> 30

<212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 80  
 taaggatccc ttcccttcaa aacatccttg 30

<210> 81  
 <211> 1014  
 <212> DNA  
 <213> Homo sapiens

<400> 81  
 atgaacagca catgtattga agaacagcat gacctggatc actatttggt tcccattggt 60  
 tacatctttg tgattatagt cagcattcca gccaatattg gatctctgtg tgtgtctttc 120  
 ctgcaaccca agaaggaaag tgaactagga atttacctct tcagtttggtc actatcagat 180  
 ttactctatg cattaactct ccctttatgg attgattata cttggaataa agacaactgg 240  
 actttctctc ctgccttggtg caaagggagt gcttttctca tgtacatgaa gttttacagc 300  
 agcacagcat tctcacctg cattgccgtt gatcgggtatt tggctgttgt ctaccctttg 360  
 aagttttttt tctaaggac aagaagaatt gcatcatgg tcagcctgtc catctggata 420  
 ttggaaacca tcttcaatgc tgtcatgttg tgggaagatg aaacagttgt tgaatattgc 480  
 gatgccgaaa agtctaattt tactttatgc tatgacaaat accctttaga gaaatggcaa 540  
 atcaacctca acttggttcag gacgtgtaca ggctatgcaa tacctttggt caccatcctg 600  
 atctgtaacc ggaaagtcta ccaagctgtg cggcacaata aagccacgga aaacaaggaa 660  
 aagaagagaa tcataaaact acttgtcagc atcacagtta cttttgtctt atgctttact 720  
 ccctttcatg tgatgttgct gattcgctgc attttagagc atgctgtgaa cttcgaagac 780  
 cacagcaatt ctgggaagcg aacttacaca atgtatagaa tcacggttgc attaacaagt 840  
 ttaaatgtgt ttgctgatcc aattctgtac tgttttggtt ccgaaacagg aagatatgat 900  
 atgtggaata tattaaaatt ctgcaactggg aggtgtaata catcacaag acaaagaaaa 960  
 cgcatacttt ctgtgtctac aaaagatact atggaattag aggtccttga gtag 1014

<210> 82  
 <211> 337  
 <212> PRT  
 <213> Homo sapiens

<400> 82

Met Asn Ser Thr Cys Ile Glu Glu Gln His Asp Leu Asp His Tyr Leu  
 1 5 10 15

Phe Pro Ile Val Tyr Ile Phe Val Ile Ile Val Ser Ile Pro Ala Asn  
 20 25 30

Ile Gly Ser Leu Cys Val Ser Phe Leu Gln Pro Lys Lys Glu Ser Glu

35

40

45

Leu Gly Ile Tyr Leu Phe Ser Leu Ser Leu Ser Asp Leu Leu Tyr Ala  
 50 55 60

Leu Thr Leu Pro Leu Trp Ile Asp Tyr Thr Trp Asn Lys Asp Asn Trp  
 65 70 75 80

Thr Phe Ser Pro Ala Leu Cys Lys Gly Ser Ala Phe Leu Met Tyr Met  
 85 90 95

Lys Phe Tyr Ser Ser Thr Ala Phe Leu Thr Cys Ile Ala Val Asp Arg  
 100 105 110

Tyr Leu Ala Val Val Tyr Pro Leu Lys Phe Phe Phe Leu Arg Thr Arg  
 115 120 125

Arg Ile Ala Leu Met Val Ser Leu Ser Ile Trp Ile Leu Glu Thr Ile  
 130 135 140

Phe Asn Ala Val Met Leu Trp Glu Asp Glu Thr Val Val Glu Tyr Cys  
 145 150 155 160

Asp Ala Glu Lys Ser Asn Phe Thr Leu Cys Tyr Asp Lys Tyr Pro Leu  
 165 170 175

Glu Lys Trp Gln Ile Asn Leu Asn Leu Phe Arg Thr Cys Thr Gly Tyr  
 180 185 190

Ala Ile Pro Leu Val Thr Ile Leu Ile Cys Asn Arg Lys Val Tyr Gln  
 195 200 205

Ala Val Arg His Asn Lys Ala Thr Glu Asn Lys Glu Lys Lys Arg Ile  
 210 215 220

Ile Lys Leu Leu Val Ser Ile Thr Val Thr Phe Val Leu Cys Phe Thr  
 225 230 235 240

Pro Phe His Val Met Leu Leu Ile Arg Cys Ile Leu Glu His Ala Val  
 245 250 255

Asn Phe Glu Asp His Ser Asn Ser Gly Lys Arg Thr Tyr Thr Met Tyr  
 260 265 270

Arg Ile Thr Val Ala Leu Thr Ser Leu Asn Cys Val Ala Asp Pro Ile  
 275 280 285

Leu Tyr Cys Phe Val Thr Glu Thr Gly Arg Tyr Asp Met Trp Asn Ile  
 290 295 300

Leu Lys Phe Cys Thr Gly Arg Cys Asn Thr Ser Gln Arg Gln Arg Lys  
 305 310 315 320

Arg Ile Leu Ser Val Ser Thr Lys Asp Thr Met Glu Leu Glu Val Leu  
 325 330 335

Glu

&lt;210&gt; 83

&lt;211&gt; 40

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

<223> Novel Sequence

<400> 83  
caggaagaag aaacgagctg tcattatgat ggtgacagtg 40

<210> 84  
<211> 40  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 84  
cactgtcacc atcataatga cagctcggtt cttcttctg 40

<210> 85  
<211> 30  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 85  
ggccaccggc agaccaaacg cgtcctgctg 30

<210> 86  
<211> 31  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 86  
ctccttcggt cctcctatcg ttgtcagaag t 31

<210> 87  
<211> 37  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 87  
ggaaaagaag agaatacaaaa aactacttgt cagcatc 37

<210> 88  
<211> 31  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 88  
ctccttcggt cctcctatcg ttgtcagaag t 31

<210> 89  
 <211> 1080  
 <212> DNA  
 <213> Homo sapiens

<400> 89  
 atgattctca actcttctac tgaagatggt attaaaagaa tccaagatga ttgtcccaaa 60  
 gctggaaggc ataattacat atttgtcatg attcctactt tatacagtat catctttgtg 120  
 gtgggaatat ttggaaacag cttggtggtg atagtcattt acttttatat gaagctgaag 180  
 actgtggcca gtgtttttct tttgaattta gcactggctg acttatgctt tttactgact 240  
 ttgccactat gggctgtcta cacagctatg gaataccgct ggccctttgg caattaccta 300  
 tgtaagattg cttcagccag cgtcagtttc aacctgtacg ctagtgtgtt tctactcacg 360  
 tgtctcagca ttgatcgata cctggctatt gttcacccaa tgaagtcccg ccttcgacgc 420  
 acaatgcttg tagccaaagt cacctgcac atcatttggc tgctggcagg cttggccagt 480  
 ttgccagcta taatccatcg aaatgtattht ttcattgaga acaccaatat tacagtttgt 540  
 gctttccatt atgagtccca aaattcaacc cttccgatag ggctgggcct gaccaaaaat 600  
 atactgggtt tctgttttcc ttttctgac attcttaca gttatactct tatttggaag 660  
 gccctaaaga aggcattatga aattcagaag aacaaaccaa gaaatgatga tattaanaag 720  
 ataattatgg caattgtgct tttcttttcc ttttctgga ttccccacca aatattcact 780  
 tttctggatg tattgattca actaggcatc atacgtgact gtagaattgc agatattgtg 840  
 gacacggcca tgcctatcac catttgtata gcttatttta acaattgcct gaatcctctt 900  
 ttttatggct tttctgggaa aaaatttaaa agatattttc tccagcttct aaaatatatt 960  
 cccccaaaag ccaaattccca ctcaaaccct tcaacaaaaa tgagcacgct ttcctaccgc 1020  
 ccctcagata atgtaagctc atccaccaag aagcctgcac catgttttga ggttgagtga 1080

<210> 90  
 <211> 359  
 <212> PRT  
 <213> Homo sapiens

<400> 90  
 Met Ile Leu Asn Ser Ser Thr Glu Asp Gly Ile Lys Arg Ile Gln Asp  
 1 5 10 15  
 Asp Cys Pro Lys Ala Gly Arg His Asn Tyr Ile Phe Val Met Ile Pro  
 20 25 30  
 Thr Leu Tyr Ser Ile Ile Phe Val Val Gly Ile Phe Gly Asn Ser Leu  
 35 40 45  
 Val Val Ile Val Ile Tyr Phe Tyr Met Lys Leu Lys Thr Val Ala Ser  
 50 55 60  
 Val Phe Leu Leu Asn Leu Ala Leu Ala Asp Leu Cys Phe Leu Leu Thr  
 65 70 75 80

```

Leu Pro Leu Trp Ala Val Tyr Thr Ala Met Glu Tyr Arg Trp Pro Phe
      85                      90                      95

Gly Asn Tyr Leu Cys Lys Ile Ala Ser Ala Ser Val Ser Phe Asn Leu
      100                    105                    110

Tyr Ala Ser Val Phe Leu Leu Thr Cys Leu Ser Ile Asp Arg Tyr Leu
      115                    120                    125

Ala Ile Val His Pro Met Lys Ser Arg Leu Arg Arg Thr Met Leu Val
      130                    135                    140

Ala Lys Val Thr Cys Ile Ile Ile Trp Leu Leu Ala Gly Leu Ala Ser
      145                    150                    155                    160

Leu Pro Ala Ile Ile His Arg Asn Val Phe Phe Ile Glu Asn Thr Asn
      165                    170                    175

Ile Thr Val Cys Ala Phe His Tyr Glu Ser Gln Asn Ser Thr Leu Pro
      180                    185                    190

Ile Gly Leu Gly Leu Thr Lys Asn Ile Leu Gly Phe Leu Phe Pro Phe
      195                    200                    205

Leu Ile Ile Leu Thr Ser Tyr Thr Leu Ile Trp Lys Ala Leu Lys Lys
      210                    215                    220

Ala Tyr Glu Ile Gln Lys Asn Lys Pro Arg Asn Asp Asp Ile Lys Lys
      225                    230                    235                    240

Ile Ile Met Ala Ile Val Leu Phe Phe Phe Phe Ser Trp Ile Pro His
      245                    250                    255

Gln Ile Phe Thr Phe Leu Asp Val Leu Ile Gln Leu Gly Ile Ile Arg
      260                    265                    270

Asp Cys Arg Ile Ala Asp Ile Val Asp Thr Ala Met Pro Ile Thr Ile
      275                    280                    285

Cys Ile Ala Tyr Phe Asn Asn Cys Leu Asn Pro Leu Phe Tyr Gly Phe
      290                    295                    300

Leu Gly Lys Lys Phe Lys Arg Tyr Phe Leu Gln Leu Leu Lys Tyr Ile
      305                    310                    315                    320

Pro Pro Lys Ala Lys Ser His Ser Asn Leu Ser Thr Lys Met Ser Thr
      325                    330                    335

Leu Ser Tyr Arg Pro Ser Asp Asn Val Ser Ser Ser Thr Lys Lys Pro
      340                    345                    350

Ala Pro Cys Phe Glu Val Glu
      355

```

```

<210> 91
<211> 35
<212> DNA
<213> Artificial

```

```

<220>
<223> Novel Sequence

```

```

<400> 91
ccaagaaatg atgatattaa aaagataatt atggc

```



<210> 92  
 <211> 31  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 92  
 ctccttcggt ctcctatcg ttgtcagaag t

31

<210> 93  
 <211> 1080  
 <212> DNA  
 <213> Homo sapiens

<400> 93  
 atgattctca actcttctac tgaagatggt attaaaagaa tccaagatga ttgtcccaaa 60  
 gctggaaggc ataattacat atttgtcatg attcctactt tatacagtat catctttgtg 120  
 gtgggaatat ttggaacag cttgggtgtg atagtcattt acttttatat gaagctgaag 180  
 actgtggcca gtgtttttct tttgaattta gcactggctg acttatgctt tttactgact 240  
 ttgccactat gggctgtcta cacagctatg gaataccgct ggccctttgg caattaccta 300  
 tgtaagattg cttcagccag cgtcagtttc gccctgtacg ctagtgtgtt tctactcacg 360  
 tgtctcagca ttgatcgata cctggctatt gttcacccaa tgaagtcccg ccttcgacgc 420  
 acaatgcttg tagccaaagt cacctgcac atcatttggc tgctggcagg cttggccagt 480  
 ttgccagcta taatccatcg aaatgtattt ttcattgaga acaccaatat tacagtttgt 540  
 gctttccatt atgagtccca aaattcaacc cttccgatag ggctgggcct gacccaaaat 600  
 atactgggtt tctgttttcc ttttctgac attcttaca gttatactct tatttggaag 660  
 gccctaaaga aggcttatga aattcagaag aacaaacca gaaatgatga tatttttaag 720  
 ataattatgg caattgtgct tttcttttcc ttttctgga ttccccacca aatattcact 780  
 tttctggatg tattgattca actaggcatc atacgtgact gtagaattgc agatattgtg 840  
 gacacggcca tgctatcac catttgtata gcttatttta acaattgcct gaatcctctt 900  
 ttttatggct tcttggggaa aaaatttaaa agatattttc tccagcttct aaaatatatt 960  
 cccccaaaag ccaaattcca ctcaaaccct tcaacaaaa tgagcacgct ttctaccgc 1020  
 ccctcagata atgtaagctc atccaccaag aagcctgcac catgttttga ggttgagtga 1080

<210> 94  
 <211> 359  
 <212> PRT  
 <213> Homo sapiens

<400> 94

Met Ile Leu Asn Ser Ser Thr Glu Asp Gly Ile Lys Arg Ile Gln Asp

```

1           5           10           15
Asp Cys Pro Lys Ala Gly Arg His Asn Tyr Ile Phe Val Met Ile Pro
      20           25           30
Thr Leu Tyr Ser Ile Ile Phe Val Val Gly Ile Phe Gly Asn Ser Leu
      35           40           45
Val Val Ile Val Ile Tyr Phe Tyr Met Lys Leu Lys Thr Val Ala Ser
      50           55           60
Val Phe Leu Leu Asn Leu Ala Leu Ala Asp Leu Cys Phe Leu Leu Thr
      65           70           75           80
Leu Pro Leu Trp Ala Val Tyr Thr Ala Met Glu Tyr Arg Trp Pro Phe
      85           90           95
Gly Asn Tyr Leu Cys Lys Ile Ala Ser Ala Ser Val Ser Phe Ala Leu
      100          105          110
Tyr Ala Ser Val Phe Leu Leu Thr Cys Leu Ser Ile Asp Arg Tyr Leu
      115          120          125
Ala Ile Val His Pro Met Lys Ser Arg Leu Arg Arg Thr Met Leu Val
      130          135          140
Ala Lys Val Thr Cys Ile Ile Ile Trp Leu Leu Ala Gly Leu Ala Ser
      145          150          155          160
Leu Pro Ala Ile Ile His Arg Asn Val Phe Phe Ile Glu Asn Thr Asn
      165          170          175
Ile Thr Val Cys Ala Phe His Tyr Glu Ser Gln Asn Ser Thr Leu Pro
      180          185          190
Ile Gly Leu Gly Leu Thr Lys Asn Ile Leu Gly Phe Leu Phe Pro Phe
      195          200          205
Leu Ile Ile Leu Thr Ser Tyr Thr Leu Ile Trp Lys Ala Leu Lys Lys
      210          215          220
Ala Tyr Glu Ile Gln Lys Asn Lys Pro Arg Asn Asp Asp Ile Phe Lys
      225          230          235          240
Ile Ile Met Ala Ile Val Leu Phe Phe Phe Phe Ser Trp Ile Pro His
      245          250          255
Gln Ile Phe Thr Phe Leu Asp Val Leu Ile Gln Leu Gly Ile Ile Arg
      260          265          270
Asp Cys Arg Ile Ala Asp Ile Val Asp Thr Ala Met Pro Ile Thr Ile
      275          280          285
Cys Ile Ala Tyr Phe Asn Asn Cys Leu Asn Pro Leu Phe Tyr Gly Phe
      290          295          300
Leu Gly Lys Lys Phe Lys Arg Tyr Phe Leu Gln Leu Leu Lys Tyr Ile
      305          310          315          320
Pro Pro Lys Ala Lys Ser His Ser Asn Leu Ser Thr Lys Met Ser Thr
      325          330          335
Leu Ser Tyr Arg Pro Ser Asp Asn Val Ser Ser Ser Thr Lys Lys Pro
      340          345          350

```

Ala Pro Cys Phe Glu Val Glu  
355

<210> 95  
<211> 26  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 95  
cccaagcttc cccaggtgta ttgat

26

<210> 96  
<211> 29  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 96  
cctgcaggcg aaactgactc tggctgaag

29

<210> 97  
<211> 42  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 97  
ctgtacgcta gtgtgtttct actcacgtgt ctcagcattg at

42

<210> 98  
<211> 26  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 98  
gttggatcca cataatgcat tttctc

26

<210> 99  
<211> 1080  
<212> DNA  
<213> Homo sapiens

<400> 99  
atgattctca actctttctac tgaagatggt attaaaagaa tccaagatga ttgtcccaaa  
gctggaaggc ataattacat atttgtcatg attcctactt tatacagtat catctttgtg  
gtgggaatat ttggaaacag cttggtggtg atagtcattt acttttatat gaagctgaag  
actgtggcca gtgtttttct tttgaattta gcaactggctg acttatgctt tttactgact

60

120

180

240

## Aren0054.ST25.txt

```

ttgccactat gggctgtcta cacagctatg gaataccgct ggccctttgg caattaccta 300
tgtaagattg cttcagccag cgctcagtttc aacctgtacg ctagtgtgtt tctactcacg 360
tgtctcagca ttgatcgata cctggctatt gttcacccaa tgaagtcccg ccttcgacgc 420
acaatgcttg tagccaaagt cacctgcac atcatttggc tgctggcagg cttggccagt 480
ttgccagcta taatccatcg aaatgtattt ttcattgaga acaccaatat tacagtttgt 540
gctttccatt atgagtccca aaattcaacc cttccgatag ggctgggcct gaccaaaaat 600
atactgggtt tctgttttc tttctgtatc attcttacia gttatttttg aattcgaaaa 660
cacttactga agacgaatag ctatgggaag aacaggataa cccgtgacca agttaagaag 720
ataattatgg caattgtgct tttctttttc ttttctgga ttccccacca aatattcact 780
tttctggatg tattgattca actaggcatc atacgtgact gtagaattgc agatattgtg 840
gacacggcca tgcctatcac catttgtata gcttatttta acaattgcct gaatcctctt 900
ttttatggct tttcggggaa aaaatttaaa agatattttc tccagcttct aaaatatatt 960
ccccaaaag ccaaattcca ctcaaacct tcaacaaaaa tgagcacgct ttcctaccgc 1020
ccctcagata atgtaagctc atccaccaag aagcctgcac catgttttga ggttgagtga 1080

```

```

<210> 100
<211> 359
<212> PRT
<213> Homo sapiens

<400> 100

```

```

Met Ile Leu Asn Ser Ser Thr Glu Asp Gly Ile Lys Arg Ile Gln Asp
1             5             10             15
Asp Cys Pro Lys Ala Gly Arg His Asn Tyr Ile Phe Val Met Ile Pro
20          25          30
Thr Leu Tyr Ser Ile Ile Phe Val Val Gly Ile Phe Gly Asn Ser Leu
35          40          45
Val Val Ile Val Ile Tyr Phe Tyr Met Lys Leu Lys Thr Val Ala Ser
50          55          60
Val Phe Leu Leu Asn Leu Ala Leu Ala Asp Leu Cys Phe Leu Leu Thr
65          70          75          80
Leu Pro Leu Trp Ala Val Tyr Thr Ala Met Glu Tyr Arg Trp Pro Phe
85          90          95
Gly Asn Tyr Leu Cys Lys Ile Ala Ser Ala Ser Val Ser Phe Asn Leu
100         105         110
Tyr Ala Ser Val Phe Leu Leu Thr Cys Leu Ser Ile Asp Arg Tyr Leu
115         120         125
Ala Ile Val His Pro Met Lys Ser Arg Leu Arg Arg Thr Met Leu Val
130         135         140
Ala Lys Val Thr Cys Ile Ile Ile Trp Leu Leu Ala Gly Leu Ala Ser
145         150         155         160

```

```

Leu Pro Ala Ile Ile His Arg Asn Val Phe Phe Ile Glu Asn Thr Asn
      165                      170                      175

Ile Thr Val Cys Ala Phe His Tyr Glu Ser Gln Asn Ser Thr Leu Pro
      180                      185                      190

Ile Gly Leu Gly Leu Thr Lys Asn Ile Leu Gly Phe Leu Phe Pro Phe
      195                      200                      205

Leu Ile Ile Leu Thr Ser Tyr Phe Gly Ile Arg Lys His Leu Leu Lys
      210                      215                      220

Thr Asn Ser Tyr Gly Lys Asn Arg Ile Thr Arg Asp Gln Val Lys Lys
      225                      230                      235                      240

Ile Ile Met Ala Ile Val Leu Phe Phe Phe Phe Ser Trp Ile Pro His
      245                      250                      255

Gln Ile Phe Thr Phe Leu Asp Val Leu Ile Gln Leu Gly Ile Ile Arg
      260                      265                      270

Asp Cys Arg Ile Ala Asp Ile Val Asp Thr Ala Met Pro Ile Thr Ile
      275                      280                      285

Cys Ile Ala Tyr Phe Asn Asn Cys Leu Asn Pro Leu Phe Tyr Gly Phe
      290                      295                      300

Leu Gly Lys Lys Phe Lys Arg Tyr Phe Leu Gln Leu Leu Lys Tyr Ile
      305                      310                      315                      320

Pro Pro Lys Ala Lys Ser His Ser Asn Leu Ser Thr Lys Met Ser Thr
      325                      330                      335

Leu Ser Tyr Arg Pro Ser Asp Asn Val Ser Ser Ser Thr Lys Lys Pro
      340                      345                      350

Ala Pro Cys Phe Glu Val Glu
      355

```

```

<210> 101
<211> 37
<212> DNA
<213> Artificial

```

```

<220>
<223> Novel Sequence

```

```

<400> 101
tccgaattcc aaaataactt gtaagaatga tcagaaa

```

37

```

<210> 102
<211> 33
<212> DNA
<213> Artificial

```

```

<220>
<223> Novel Sequence

```

```

<400> 102
agatcttaag aagataatta tggcaattgt gct

```

33

```

<210> 103

```

<211> 62  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 103  
 aattcgaaaa cacttactga agacgaatag ctatgggaag aacaggataa cccgtgacca 60  
 ag 62

<210> 104  
 <211> 62  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 104  
 ttaacttggt cacgggttat cctgttcttc ccatagctat tcgtcttcag taagtgtttt 60  
 cg 62

<210> 105  
 <211> 1083  
 <212> DNA  
 <213> Homo sapiens

<400> 105  
 atgattctca actcttctac tgaagatggt attaaaagaa tccaagatga ttgtcccaaa 60  
 gctggaaggc ataattacat atttgtcatg attcctactt tatacagtat catctttgtg 120  
 gtgggaatat ttggaaacag cttggtggtg atagtcattt acttttatat gaagctgaag 180  
 actgtggcca gtgtttttct tttgaattta gcactggctg acttatgctt tttactgact 240  
 ttgccactat gggctgtcta cacagctatg gaataccgct ggccctttgg caattaccta 300  
 tgtaagattg cttcagccag cgtcagtttc aacctgtacg ctagtgtgtt tctactcacg 360  
 tgtctcagca ttgatcgata cctggctatt gttcacccaa tgaagtcccg ccttcgacgc 420  
 acaatgcttg tagccaaagt cacctgcac atcatttggc tgctggcagg cttggccagt 480  
 ttgccagcta taatocatcg aaatgtattt ttcattgaga acaccaatat tacagtttgt 540  
 gctttccatt atgagtccca aaattcaacc cttccgatag ggctgggcct gaccaaaaat 600  
 atactgggtt tcctgtttcc ttttctgatc attcttaca gttatactct tatttggaag 660  
 gccctaaaga aggcttatga aattcagaag aacaaaccaa gaaatgatga tatttttaag 720  
 ataattatgg cagcaattgt gcttttcttt ttcttttcct ggattcccca ccaaatttc 780  
 acttttctgg atgtattgat tcaactaggc atcatagctg actgtagaat tgcagatatt 840  
 gtggacacgg ccattgctat caccatttgt atagcttatt ttaacaattg cctgaatcct 900  
 cttttttatg gctttctggg gaaaaaattt aaaagatatt ttctccagct tctaaaatat 960

```

attcccccaa aagccaaatc ccactcaaac ctttcaacaa aaatgagcac gctttcctac 1020
cgccccctcag ataatgtaag ctcatccacc aagaagcctg caccatgttt tgagggttgag 1080
tga 1083

```

```

<210> 106
<211> 360
<212> PRT
<213> Homo sapiens

```

```
<400> 106
```

```

Met Ile Leu Asn Ser Ser Thr Glu Asp Gly Ile Lys Arg Ile Gln Asp
1          5          10          15
Asp Cys Pro Lys Ala Gly Arg His Asn Tyr Ile Phe Val Met Ile Pro
20         25         30
Thr Leu Tyr Ser Ile Ile Phe Val Val Gly Ile Phe Gly Asn Ser Leu
35         40         45
Val Val Ile Val Ile Tyr Phe Tyr Met Lys Leu Lys Thr Val Ala Ser
50         55         60
Val Phe Leu Leu Asn Leu Ala Leu Ala Asp Leu Cys Phe Leu Leu Thr
65         70         75         80
Leu Pro Leu Trp Ala Val Tyr Thr Ala Met Glu Tyr Arg Trp Pro Phe
85         90         95
Gly Asn Tyr Leu Cys Lys Ile Ala Ser Ala Ser Val Ser Phe Asn Leu
100        105        110
Tyr Ala Ser Val Phe Leu Leu Thr Cys Leu Ser Ile Asp Arg Tyr Leu
115        120        125
Ala Ile Val His Pro Met Lys Ser Arg Leu Arg Arg Thr Met Leu Val
130        135        140
Ala Lys Val Thr Cys Ile Ile Ile Trp Leu Leu Ala Gly Leu Ala Ser
145        150        155        160
Leu Pro Ala Ile Ile His Arg Asn Val Phe Phe Ile Glu Asn Thr Asn
165        170        175
Ile Thr Val Cys Ala Phe His Tyr Glu Ser Gln Asn Ser Thr Leu Pro
180        185        190
Ile Gly Leu Gly Leu Thr Lys Asn Ile Leu Gly Phe Leu Phe Pro Phe
195        200        205
Leu Ile Ile Leu Thr Ser Tyr Thr Leu Ile Trp Lys Ala Leu Lys Lys
210        215        220
Ala Tyr Glu Ile Gln Lys Asn Lys Pro Arg Asn Asp Asp Ile Phe Lys
225        230        235        240
Ile Ile Met Ala Ala Ile Val Leu Phe Phe Phe Phe Ser Trp Ile Pro
245        250        255
His Gln Ile Phe Thr Phe Leu Asp Val Leu Ile Gln Leu Gly Ile Ile
260        265        270

```

Aren0054.ST25.txt

Arg Asp Cys Arg Ile Ala Asp Ile Val Asp Thr Ala Met Pro Ile Thr  
275 280 285

Ile Cys Ile Ala Tyr Phe Asn Asn Cys Leu Asn Pro Leu Phe Tyr Gly  
290 295 300

Phe Leu Gly Lys Lys Phe Lys Arg Tyr Phe Leu Gln Leu Leu Lys Tyr  
305 310 315 320

Ile Pro Pro Lys Ala Lys Ser His Ser Asn Leu Ser Thr Lys Met Ser  
325 330 335

Thr Leu Ser Tyr Arg Pro Ser Asp Asn Val Ser Ser Ser Thr Lys Lys  
340 345 350

Pro Ala Pro Cys Phe Glu Val Glu  
355 360

<210> 107

<211> 26

<212> DNA

<213> Artificial

<220>

<223> Novel Sequence

<400> 107

cccaagcttc cccaggtgta ttgat

26

<210> 108

<211> 38

<212> DNA

<213> Artificial

<220>

<223> Novel Sequence

<400> 108

aagcacaatt gctgcataat tatcttaaaa atatcatc

38

<210> 109

<211> 39

<212> DNA

<213> Artificial

<220>

<223> Novel Sequence

<400> 109

aagataatta tggcagcaat tgtgcttttc tttttcttt

39

<210> 110

<211> 26

<212> DNA

<213> Artificial

<220>

<223> Novel Sequence

<400> 110

gttgatcca cataatgcat tttctc

26



<210> 111  
 <211> 1344  
 <212> DNA  
 <213> Homo sapiens

<400> 111  
 atggagctgc taaagctgaa ccggagcgtg cagggaaccg gacccgggcc gggggcttcc 60  
 ctgtgccgcc cgggggcccc tctcctcaac agcagcagtg tgggcaacct cagctgcgag 120  
 cccctctgca ttcgaggagc cgggacacga gaattggagc tggccattag aatcactctt 180  
 tacgcagtga tcttctgat gagcgttga gaaatatgc tcatcatcgt ggtcctggga 240  
 ctgagccgcc gcctgaggac tgtcaccaat gccttctcc tctcactggc agtcagcgac 300  
 ctctgtctgg ctgtggcttg catgcccttc accctcctgc ccaatctcat gggcacattc 360  
 atctttggca ccgtcatctg caaggcgggt tcctacctca tgggggtgtc tgtgagtgtg 420  
 tccacgctaa gcctcgtggc catcgactg gagcgatata gcgccatctg ccgaccactg 480  
 caggcacgag tgtggcagac gcgctccac gcggctcgcg tgattgtagc cacgtggctg 540  
 ctgtccggac tactcatggt gccctacccc gtgtacactg tcgtgcaacc agtggggcct 600  
 cgtgtgtctg agtgctgca tcgtggccc agtgcgagg tccgccagac ctggtccgta 660  
 ctgtgtcttc tgtcttctgt ttctatccca ggtgtgtgta tggccgtggc ctacgggctt 720  
 atctctcgcg agctctactt agggcttcgc tttgacggc acagtgcag cgacagccaa 780  
 agcagggtcc gaaaccaagg cgggctgcca ggggctgttc accagaacgg gcgttgccgg 840  
 cctgagactg gcgcgggttg caaagacagc gatggctgct acgtgcaact tccacgttcc 900  
 cggcctgccc tggagctgac ggcgctgacg gctcctgggc cgggatccgg ctcccggccc 960  
 acccaggcca agctgctggc taagaagcgc gtgaaacgaa tgttctgtgt gatcgttgtg 1020  
 cttttttttc tgtgttgggt gccagtttat agtgccaaca cgtggcgcg ctttgatggc 1080  
 ccgggtgcac accgagcact ctgggtgct cctatctcct tcattcactt gctgagctac 1140  
 gcctcggcct gtgtcaaccc cctggctctac tgcttcatgc accgtcgtt tcgccaggcc 1200  
 tgcctggaaa cttgcgtcgc ctgtgcccc cggcctccac gagctcgccc cagggtcttt 1260  
 cccgatgagg accctccac tcctccatt gcttcgtgt ccaggcttag ctacaccacc 1320  
 atcagcacac tgggccttg ctga 1344

<210> 112  
 <211> 447  
 <212> PRT  
 <213> Homo sapiens

<400> 112

Met Glu Leu Leu Lys Leu Asn Arg Ser Val Gln Gly Thr Gly Pro Gly  
 1 5 10 15

Pro Gly Ala Ser Leu Cys Arg Pro Gly Ala Pro Leu Leu Asn Ser Ser

20

25

30

Ser Val Gly Asn Leu Ser Cys Glu Pro Pro Arg Ile Arg Gly Ala Gly  
 35 40 45

Thr Arg Glu Leu Glu Leu Ala Ile Arg Ile Thr Leu Tyr Ala Val Ile  
 50 55 60

Phe Leu Met Ser Val Gly Gly Asn Met Leu Ile Ile Val Val Leu Gly  
 65 70 75 80

Leu Ser Arg Arg Leu Arg Thr Val Thr Asn Ala Phe Leu Leu Ser Leu  
 85 90 95

Ala Val Ser Asp Leu Leu Leu Ala Val Ala Cys Met Pro Phe Thr Leu  
 100 105 110

Leu Pro Asn Leu Met Gly Thr Phe Ile Phe Gly Thr Val Ile Cys Lys  
 115 120 125

Ala Val Ser Tyr Leu Met Gly Val Ser Val Ser Val Ser Thr Leu Ser  
 130 135 140

Leu Val Ala Ile Ala Leu Glu Arg Tyr Ser Ala Ile Cys Arg Pro Leu  
 145 150 155 160

Gln Ala Arg Val Trp Gln Thr Arg Ser His Ala Ala Arg Val Ile Val  
 165 170 175

Ala Thr Trp Leu Leu Ser Gly Leu Leu Met Val Pro Tyr Pro Val Tyr  
 180 185 190

Thr Val Val Gln Pro Val Gly Pro Arg Val Leu Gln Cys Val His Arg  
 195 200 205

Trp Pro Ser Ala Arg Val Arg Gln Thr Trp Ser Val Leu Leu Leu Leu  
 210 215 220

Leu Leu Phe Phe Ile Pro Gly Val Val Met Ala Val Ala Tyr Gly Leu  
 225 230 235 240

Ile Ser Arg Glu Leu Tyr Leu Gly Leu Arg Phe Asp Gly Asp Ser Asp  
 245 250 255

Ser Asp Ser Gln Ser Arg Val Arg Asn Gln Gly Gly Leu Pro Gly Ala  
 260 265 270

Val His Gln Asn Gly Arg Cys Arg Pro Glu Thr Gly Ala Val Gly Lys  
 275 280 285

Asp Ser Asp Gly Cys Tyr Val Gln Leu Pro Arg Ser Arg Pro Ala Leu  
 290 295 300

Glu Leu Thr Ala Leu Thr Ala Pro Gly Pro Gly Ser Gly Ser Arg Pro  
 305 310 315 320

Thr Gln Ala Lys Leu Leu Ala Lys Lys Arg Val Lys Arg Met Leu Leu  
 325 330 335

Val Ile Val Val Leu Phe Phe Leu Cys Trp Leu Pro Val Tyr Ser Ala  
 340 345 350

Asn Thr Trp Arg Ala Phe Asp Gly Pro Gly Ala His Arg Ala Leu Ser  
 355 360 365

Aren0054.ST25.txt

Val Ala Pro Ile Ser Phe Ile His Leu Leu Ser Tyr Ala Ser Ala Cys  
370 375 380

Val Asn Pro Leu Val Tyr Cys Phe Met His Arg Arg Phe Arg Gln Ala  
385 390 395 400

Cys Leu Glu Thr Cys Ala Arg Cys Cys Pro Arg Pro Pro Arg Ala Arg  
405 410 415

Pro Arg Ala Leu Pro Asp Glu Asp Pro Pro Thr Pro Ser Ile Ala Ser  
420 425 430

Leu Ser Arg Leu Ser Tyr Thr Thr Ile Ser Thr Leu Gly Pro Gly  
435 440 445

<210> 113  
<211> 34  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 113  
cagcagcatg cgcttcacgc gcttcttagc ccag

34

<210> 114  
<211> 35  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 114  
agaagcgcggt gaagcgcatg ctgctggtga tcggt

35

<210> 115  
<211> 33  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 115  
atggagaaaa gaatcaaaag aatgttctat ata

33

<210> 116  
<211> 33  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 116  
tatatagaac attcttttga ttcttttctc cat

33

<210> 117  
<211> 30

<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 117  
cgctctcttg ccttgaagcg cacgctcagc

30

<210> 118  
<211> 30  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 118  
gctgagcgtg cgcttcaagg ccagagagcg

30

<210> 119  
<211> 30  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 119  
cccaggaaaa aggtgaaagt caaagttttc

30

<210> 120  
<211> 30  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 120  
gaaaactttg actttcacct ttttcctggg

30

<210> 121  
<211> 27  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 121  
ggggcgcggg tgaaacggct ggtgagc

27

<210> 122  
<211> 27  
<212> DNA  
<213> Artificial

<220>  
<223> Novel Sequence

<400> 122  
 gctcaccagc cgtttcaccc gcgcccc 27

<210> 123  
 <211> 30  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 123  
 ccccttgaaa agcctaagaa cttggtcatc 30

<210> 124  
 <211> 30  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 124  
 gatgaccaag ttcttaggct tttcaagggg 30

<210> 125  
 <211> 32  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 125  
 gatctctaga atgaacagca catgtattga ag 32

<210> 126  
 <211> 35  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 126  
 ctaggtacc cgctcaagga cctctaattc catag 35

<210> 127  
 <211> 1296  
 <212> DNA  
 <213> Homo sapiens

<400> 127  
 atgcaggcgc ttaacattac cccggagcag ttctctcggc tgctgcggga ccacaacctg 60

acgcgggagc agttcatogc tctgtaccgg ctgcgaccgc tcgtctacac ccagagctg 120

ccgggacgcg ccaagctggc cctcgtgctc accggcgtgc tcattctcgc cctggcgctc 180

```

tttggcaatg ctctggtggt ctacgtgggtg acccgagca aggccatgcg caccgtcacc 240
aacatcttta tctgctcctt ggcgtcagc gacctgctca tcaccttctt ctgcattccc 300
gtcaccatgc tccagaacat ttccgacaac tggctggggg gtgctttcat ttgcaagatg 360
gtgccatttg tccagtctac cgctgttggtg acagaaatgc tcactatgac ctgcattgct 420
gtggaaaggg accagggact tgtgcatcct tttaaaatga agtggcaata caccaaccga 480
agggctttca caatgctagg tgtggtctgg ctgggtggcag tcatcgtagg atcacccatg 540
tggcacgtgc aacaacttga gatcaaatat gacttcctat atgaaaagga acacatctgc 600
tgcttagaag agtggaccag cctgtgacac cagaagatct acaccacctt catccttgtc 660
atcctcttcc tctgcctctt tatggtgatg cttattctgt acagtaaaat tggttatgaa 720
ctttggataa agaaaagagt tggggatggt tcagtgcctc gaactattca tggaaaagaa 780
atgtccaaaa tagccaggaa gaagaaacga gctaagatta tgatggtgac agtgggtggct 840
ctctttgctg tgtgctgggc accattccat gttgtccata tgatgattga atacagtaat 900
tttgaaggagg aatatgatga tgtcacaaac aagatgattt ttgctatcgt gcaaattatt 960
ggattttcca actccatctg taatoccatt gtctatgcat ttatgaatga aaacttcaaa 1020
aaaaatgttt tgtctgcagt ttgttattgc atagtaaata aaaccttctc tccagcacia 1080
aggcatggaa attcaggaat tacaatgatg cggaagaaag caaagttttc cctcagagag 1140
aatccagtgg aggaacccaa aggagaagca ttcagtgatg gcaacattga agtcaaattg 1200
tgtgaacaga cagaggagaa gaaaaagctc aaacgacatc ttgctctctt taggtctgaa 1260
ctggctgaga attctccttt agacagtggg cattaa 1296

```

```

<210> 128
<211> 431
<212> PRT
<213> Homo sapiens
<400> 128

```

```

Met Gln Ala Leu Asn Ile Thr Pro Glu Gln Phe Ser Arg Leu Leu Arg
1          5          10          15
Asp His Asn Leu Thr Arg Glu Gln Phe Ile Ala Leu Tyr Arg Leu Arg
20          25          30
Pro Leu Val Tyr Thr Pro Glu Leu Pro Gly Arg Ala Lys Leu Ala Leu
35          40          45
Val Leu Thr Gly Val Leu Ile Phe Ala Leu Ala Leu Phe Gly Asn Ala
50          55          60
Leu Val Phe Tyr Val Val Thr Arg Ser Lys Ala Met Arg Thr Val Thr
65          70          75          80
Asn Ile Phe Ile Cys Ser Leu Ala Leu Ser Asp Leu Leu Ile Thr Phe
85          90          95
Phe Cys Ile Pro Val Thr Met Leu Gln Asn Ile Ser Asp Asn Trp Leu

```

100

105

110

Gly Gly Ala Phe Ile Cys Lys Met Val Pro Phe Val Gln Ser Thr Ala  
 115 120 125  
 Val Val Thr Glu Met Leu Thr Met Thr Cys Ile Ala Val Glu Arg His  
 130 135 140  
 Gln Gly Leu Val His Pro Phe Lys Met Lys Trp Gln Tyr Thr Asn Arg  
 145 150 155 160  
 Arg Ala Phe Thr Met Leu Gly Val Val Trp Leu Val Ala Val Ile Val  
 165 170 175  
 Gly Ser Pro Met Trp His Val Gln Gln Leu Glu Ile Lys Tyr Asp Phe  
 180 185 190  
 Leu Tyr Glu Lys Glu His Ile Cys Cys Leu Glu Glu Trp Thr Ser Pro  
 195 200 205  
 Val His Gln Lys Ile Tyr Thr Thr Phe Ile Leu Val Ile Leu Phe Leu  
 210 215 220  
 Leu Pro Leu Met Val Met Leu Ile Leu Tyr Ser Lys Ile Gly Tyr Glu  
 225 230 235 240  
 Leu Trp Ile Lys Lys Arg Val Gly Asp Gly Ser Val Leu Arg Thr Ile  
 245 250 255  
 His Gly Lys Glu Met Ser Lys Ile Ala Arg Lys Lys Lys Arg Ala Lys  
 260 265 270  
 Ile Met Met Val Thr Val Val Ala Leu Phe Ala Val Cys Trp Ala Pro  
 275 280 285  
 Phe His Val Val His Met Met Ile Glu Tyr Ser Asn Phe Glu Lys Glu  
 290 295 300  
 Tyr Asp Asp Val Thr Ile Lys Met Ile Phe Ala Ile Val Gln Ile Ile  
 305 310 315 320  
 Gly Phe Ser Asn Ser Ile Cys Asn Pro Ile Val Tyr Ala Phe Met Asn  
 325 330 335  
 Glu Asn Phe Lys Lys Asn Val Leu Ser Ala Val Cys Tyr Cys Ile Val  
 340 345 350  
 Asn Lys Thr Phe Ser Pro Ala Gln Arg His Gly Asn Ser Gly Ile Thr  
 355 360 365  
 Met Met Arg Lys Lys Ala Lys Phe Ser Leu Arg Glu Asn Pro Val Glu  
 370 375 380  
 Glu Thr Lys Gly Glu Ala Phe Ser Asp Gly Asn Ile Glu Val Lys Leu  
 385 390 395 400  
 Cys Glu Gln Thr Glu Glu Lys Lys Lys Leu Lys Arg His Leu Ala Leu  
 405 410 415  
 Phe Arg Ser Glu Leu Ala Glu Asn Ser Pro Leu Asp Ser Gly His  
 420 425 430

<210> 129  
 <211> 2040  
 <212> DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 129

atgggcagcc cctggaacgg cagcgacggc cccgaggggg cgcgggagcc gccgtggccc	60
gcgctgccgc cttgcgacga gcgcgcgtgc tcgcccttcc cctggggggc gctggtgccg	120
gtgaccgctg tgtgcctgtg cctgttcgtc gtgggggtga gcggaacgt ggtgaccgtg	180
atgctgatcg ggcgctaccg ggacatgcgg accaccacca acttgtacct gggcagcatg	240
gccgtgtccg acctactcat cctgctcggg ctgccgttcg acctgtaccg cctctggcgc	300
tcgcggccct ggggtgttcgg gccgctgctc tgcgcctgt ccctctacgt gggcgagggc	360
tgcacctacg ccacgctgct gcacatgacc gcgctcagcg tcgagcgcta cctggccatc	420
tgcgcgccgc tccgcgcgcg cgtcttggtc acccgggccc gcgtccgcgc gctcatcgct	480
gtgctctggg ccgtggcgct gctctctgcc ggtcccttct tgttcttggg gggcgctcag	540
caggaccccg gcctctccgt agtcccgggc ctcaatggca ccgcgcggat cgctcctcg	600
cctctcgcct cgtcgcgcgc tctctggctc tcgcggggcg caccgccgtc cccgcgcgtc	660
gggcccagga ccgcggaggg cgcgggcgctg ttcagccgcg aatgccggcc gagccccgcg	720
cagctggggc cgctgcgtgt catgctgtgg gtcaccaccg cctacttctt cctgcccttt	780
ctgtgcctca gcctcctcta cgggctcctc gggcgggagc tgtggagcag ccggcgggcg	840
ctgcgagggc cggccgcctc gggcggggag agaggccacc ggcagaccaa acgcgtcctg	900
cgtaagtggg gccgcggtgg ttccaaagac gcctgcctgc agtccgcccc gccggggacc	960
gcgcaaacgc tgggtccctt tccctgctc gccagctct gggcgccgct tccagctccc	1020
tttctatatt cgattccagc ctccaccgc cggtacttcc catccccga gaaaaccatg	1080
tcctgtcccc caggagctct gggggacccc agggcgcttt gaggggtggg tccccggatc	1140
cgattcagta accagcagtg cttttccaga gcctctgaga ccagaaagga gaggttggtg	1200
ttcttaatcc aaccacctgt tagatgccac aaatgaggag tcctcacagt gctcttgaga	1260
agacgagggg gatttcatta agctaaaatt ttttatataa tgttaagtga tgctgaaggc	1320
taaagtaaac cttgctcgta tcaaaaagta aagattgtgc agacctgtg tagaattctt	1380
ttcaacagag aacagaaaac ttgtctccga agtgggtttg tggaaggaag cctgccaaag	1440
cggcttggtc agagaaattg ctcttcttg tttatgtcca gccttgataa cacatatggg	1500
agcctactat gcagttttta agcaagtatc catgcagcct gcagcctggt cattttttct	1560
ggggtgagga tctgcctagg tagaagtttt ctctaattta ttttgctgtt acttggtatt	1620
gcagatgggt ccttgctcgg gtgggggggt tatttgcttc ccaatgcttt tgtaaatccc	1680
ggtgctgtgt cttatgttg agtggtggtg gttctggcat ttataatttg ctggttgccc	1740
ttccacgttg gcagaatcat ttacataaac acggaagatt cgcgatgat gtacttctct	1800
cagtacttta acatcgtcgc tctgcaactt ttctatctga gcgcatctat caaccaatc	1860



ctctacaacc tcatttcaaa gaagtacaga gcggcgccct ttaaactgct gctcgcaagg 1920  
aagtccaggc cgagaggctt ccacagaagc agggacactg cgggggaagt tgcaggggac 1980  
actggaggag acacggtggg ctacaccgag acaagcgcta acgtgaagac gatgggataa 2040

<210> 130  
<211> 412  
<212> PRT  
<213> Homo sapiens

<400> 130

Met Gly Ser Pro Trp Asn Gly Ser Asp Gly Pro Glu Gly Ala Arg Glu  
1 5 10 15  
Pro Pro Trp Pro Ala Leu Pro Pro Cys Asp Glu Arg Arg Cys Ser Pro  
20 25 30  
Phe Pro Leu Gly Ala Leu Val Pro Val Thr Ala Val Cys Leu Cys Leu  
35 40 45  
Phe Val Val Gly Val Ser Gly Asn Val Val Thr Val Met Leu Ile Gly  
50 55 60  
Arg Tyr Arg Asp Met Arg Thr Thr Thr Asn Leu Tyr Leu Gly Ser Met  
65 70 75 80  
Ala Val Ser Asp Leu Leu Ile Leu Leu Gly Leu Pro Phe Asp Leu Tyr  
85 90 95  
Arg Leu Trp Arg Ser Arg Pro Trp Val Phe Gly Pro Leu Leu Cys Arg  
100 105 110  
Leu Ser Leu Tyr Val Gly Glu Gly Cys Thr Tyr Ala Thr Leu Leu His  
115 120 125  
Met Thr Ala Leu Ser Val Glu Arg Tyr Leu Ala Ile Cys Arg Pro Leu  
130 135 140  
Arg Ala Arg Val Leu Val Thr Arg Arg Arg Val Arg Ala Leu Ile Ala  
145 150 155 160  
Val Leu Trp Ala Val Ala Leu Leu Ser Ala Gly Pro Phe Leu Phe Leu  
165 170 175  
Val Gly Val Glu Gln Asp Pro Gly Ile Ser Val Val Pro Gly Leu Asn  
180 185 190  
Gly Thr Ala Arg Ile Ala Ser Ser Pro Leu Ala Ser Ser Pro Pro Leu  
195 200 205  
Trp Leu Ser Arg Ala Pro Pro Pro Ser Pro Pro Ser Gly Pro Glu Thr  
210 215 220  
Ala Glu Ala Ala Ala Leu Phe Ser Arg Glu Cys Arg Pro Ser Pro Ala  
225 230 235 240  
Gln Leu Gly Ala Leu Arg Val Met Leu Trp Val Thr Thr Ala Tyr Phe  
245 250 255  
Phe Leu Pro Phe Leu Cys Leu Ser Ile Leu Tyr Gly Leu Ile Gly Arg  
260 265 270

## Aren0054.ST25.txt

Glu Leu Trp Ser Ser Arg Arg Pro Leu Arg Gly Pro Ala Ala Ser Gly  
275 280 285

Arg Glu Arg Gly His Arg Gln Thr Lys Arg Val Leu Leu Val Val Val  
290 295 300

Leu Ala Phe Ile Ile Cys Trp Leu Pro Phe His Val Gly Arg Ile Ile  
305 310 315 320

Tyr Ile Asn Thr Glu Asp Ser Arg Met Met Tyr Phe Ser Gln Tyr Phe  
325 330 335

Asn Ile Val Ala Leu Gln Leu Phe Tyr Leu Ser Ala Ser Ile Asn Pro  
340 345 350

Ile Leu Tyr Asn Leu Ile Ser Lys Lys Tyr Arg Ala Ala Ala Phe Lys  
355 360 365

Leu Leu Leu Ala Arg Lys Ser Arg Pro Arg Gly Phe His Arg Ser Arg  
370 375 380

Asp Thr Ala Gly Glu Val Ala Gly Asp Thr Gly Gly Asp Thr Val Gly  
385 390 395 400

Tyr Thr Glu Thr Ser Ala Asn Val Lys Thr Met Gly  
405 410

<210> 131

<211> 1344

<212> DNA

<213> Homo sapiens

<400> 131

atggagctgc taaagctgaa ccggagcgtg cagggaaccg gaccggggcc gggggcttcc 60

ctgtgcgcgc ccgggggcgc tctcctcaac agcagcagtg tgggcaacct cagctgcgag 120

ccccctcgca ttcgcggagc cgggacacga gaattggagc tggccattag aatcactctt 180

tacgcagtgat tcttctgat gagcgttgga ggaaatatgc tcatcatcgt ggtcctggga 240

ctgagccgcc gcctgaggac tgacaccaat gccttctctc tctcactggc agtcagcgac 300

ctcctgctgg ctgtggcttg catgcccttc accctcctgc ccaatctcat gggcacattc 360

atctttggca ccgtcatctg caaggcgggt tcctacctca tgggggtgtc tgtgagtgtg 420

tccacgctaa gcctcgtggc catgcactg gagcgatata gcgccatctg ccgaccactg 480

caggcacgag tgtggcagac gcgctccac gcggctcgcg tgattgtagc cacgtggctg 540

ctgtccggac tactcatggt gccctacccc gtgtacactg tcgtgcaacc agtggggcct 600

cgtgtgctgc agtgcggtga tcgctggccc agtgcgcggt tccgccagac ctggtccgta 660

ctgctgcttc tgctcttggt ctcatccca ggtgtggtta tggccgtggc ctacgggctt 720

atctctcgcg agctctactt agggcttcgc ttgacggcg acagtgacag cgacagccaa 780

agcagggtcc gaaaccaagg cgggctgccg ggggctgttc accagaacgg gcgttgccgg 840

cctgagactg gcgcggttgg caaagacagc gatggctgct acgtgcaact tccacgttcc 900

cggcctgccc tggagctgac ggcgctgacg gctcctgggc cgggatccgg ctcccggccc 960

## Aren0054.ST25.txt

```

accagggcca agctgctggc taagaagcgc gtgaaacgaa tggtgctggt gatcggtgtg 1020
cttttttttc tgtgttggtt gccagtttat agtgccaaca cgtggcgcgc ctttgatggc 1080
ccgggtgcac accgagcact ctgggtgct cctatctcct tcattcactt gctgagctac 1140
gcctcggcct gtgtcaaccc cctggtctac tgcttcacgc accgtcgctt tcgccaggcc 1200
tgcttgaaaa cttgcgctcg ctgctgcccc cggcctccac gagctcgccc cagggtcttt 1260
cccgatgagg accctccac tccctccatt gcttcgctgt ccaggcttag ctacaccacc 1320
atcagcacac tgggcctgg ctga 1344

```

```

<210> 132
<211> 447
<212> PRT
<213> Homo sapiens
<400> 132

```

```

Met Glu Leu Leu Lys Leu Asn Arg Ser Val Gln Gly Thr Gly Pro Gly
1      5      10      15
Pro Gly Ala Ser Leu Cys Arg Pro Gly Ala Pro Leu Leu Asn Ser Ser
20      25      30
Ser Val Gly Asn Leu Ser Cys Glu Pro Pro Arg Ile Arg Gly Ala Gly
35      40      45
Thr Arg Glu Leu Glu Leu Ala Ile Arg Ile Thr Leu Tyr Ala Val Ile
50      55      60
Phe Leu Met Ser Val Gly Gly Asn Met Leu Ile Ile Val Val Leu Gly
65      70      75      80
Leu Ser Arg Arg Leu Arg Thr Val Thr Asn Ala Phe Leu Leu Ser Leu
85      90      95
Ala Val Ser Asp Leu Leu Leu Ala Val Ala Cys Met Pro Phe Thr Leu
100     105     110
Leu Pro Asn Leu Met Gly Thr Phe Ile Phe Gly Thr Val Ile Cys Lys
115     120     125
Ala Val Ser Tyr Leu Met Gly Val Ser Val Ser Val Ser Thr Leu Ser
130     135     140
Leu Val Ala Ile Ala Leu Glu Arg Tyr Ser Ala Ile Cys Arg Pro Leu
145     150     155     160
Gln Ala Arg Val Trp Gln Thr Arg Ser His Ala Ala Arg Val Ile Val
165     170     175
Ala Thr Trp Leu Leu Ser Gly Leu Leu Met Val Pro Tyr Pro Val Tyr
180     185     190
Thr Val Val Gln Pro Val Gly Pro Arg Val Leu Gln Cys Val His Arg
195     200     205
Trp Pro Ser Ala Arg Val Arg Gln Thr Trp Ser Val Leu Leu Leu Leu
210     215     220
Leu Leu Phe Phe Ile Pro Gly Val Val Met Ala Val Ala Tyr Gly Leu

```

225                      230                      235                      240  
 Ile Ser Arg Glu Leu Tyr Leu Gly Leu Arg Phe Asp Gly Asp Ser Asp  
                                  245                                   250                                   255  
 Ser Asp Ser Gln Ser Arg Val Arg Asn Gln Gly Gly Leu Pro Gly Ala  
                                  260                                   265                                   270  
 Val His Gln Asn Gly Arg Cys Arg Pro Glu Thr Gly Ala Val Gly Lys  
                                  275                                   280                                   285  
 Asp Ser Asp Gly Cys Tyr Val Gln Leu Pro Arg Ser Arg Pro Ala Leu  
                                  290                                   295                                   300  
 Glu Leu Thr Ala Leu Thr Ala Pro Gly Pro Gly Ser Gly Ser Arg Pro  
                                  305                                   310                                   315                                   320  
 Thr Gln Ala Lys Leu Leu Ala Lys Lys Arg Val Lys Arg Met Leu Leu  
                                  325                                   330                                   335  
 Val Ile Val Val Leu Phe Phe Leu Cys Trp Leu Pro Val Tyr Ser Ala  
                                  340                                   345                                   350  
 Asn Thr Trp Arg Ala Phe Asp Gly Pro Gly Ala His Arg Ala Leu Ser  
                                  355                                   360                                   365  
 Val Ala Pro Ile Ser Phe Ile His Leu Leu Ser Tyr Ala Ser Ala Cys  
                                  370                                   375                                   380  
 Val Asn Pro Leu Val Tyr Cys Phe Met His Arg Arg Phe Arg Gln Ala  
                                  385                                   390                                   395                                   400  
 Cys Leu Glu Thr Cys Ala Arg Cys Cys Pro Arg Pro Pro Arg Ala Arg  
                                  405                                   410                                   415  
 Pro Arg Ala Leu Pro Asp Glu Asp Pro Pro Thr Pro Ser Ile Ala Ser  
                                  420                                   425                                   430  
 Leu Ser Arg Leu Ser Tyr Thr Thr Ile Ser Thr Leu Gly Pro Gly  
                                  435                                   440                                   445

<210> 133  
 <211> 1014  
 <212> DNA  
 <213> Homo sapiens

<400> 133  
 atgaacagca catgtattga agaacagcat gacctggatc actatttggt tccattggt      60  
 tacatctttg tgattatagt cagcattcca gccaatattg gatctctgtg tgtgtctttc      120  
 ctgcaagcaa agaaggaaag tgaactagga atttacctct tcagtttggtc actatcagat      180  
 ttactctatg cattaactct ccctttatgg attgattata cttggaataa agacaactgg      240  
 actttctctc ctgccttggtg caaagggagt gcttttctca tgtacatgaa tttttacagc      300  
 agcacagcat tcttcacctg cattgccgtt gatcgggtatt tggctgttgt ctaccctttg      360  
 aagttttttt tcctaaggac aagaagattt gcactcatgg tcagcctgtc catctggata      420  
 ttggaaacca tcttcaatgc tgtcatgttg tgggaagatg aaacagttgt tgaatattgc      480  
 gatgccgaaa agtctaattt tactttatgc tatgacaaat accctttaga gaaatggcaa      540

## Aren0054.ST25.txt

```

atcaacctca acttggtcag gacgtgtaca ggctatgcaa tacctttggt caccatcctg      600
atctgtaacc ggaaagtcta ccaagctgtg cggcacaata aagccacgga aaacaaggaa      660
aagaagagaa tcaaaaaact acttgtcagc atcacagtta cttttgtctt atgctttact      720
ccctttcatg tgatgttgct gattcgctgc attttagagc atgctgtgaa cttcgaagac      780
cacagcaatt ctgggaagcg aacttacaca atgtatagaa tcacggttgc attaacaagt      840
ttaaattgtg ttgctgatcc aattctgtac tgttttggtta ccgaaacagg aagatatgat      900
atgtggaata tattaaaatt ctgcactggg aggtgtaata catcacaag acaaagaaaa      960
cgcatacttt ctgtgtctac aaaagatact atggaattag aggtccttga gtag          1014

```

<210> 134  
 <211> 337  
 <212> PRT  
 <213> Homo sapiens

<400> 134

```

Met Asn Ser Thr Cys Ile Glu Glu Gln His Asp Leu Asp His Tyr Leu
1          5          10          15
Phe Pro Ile Val Tyr Ile Phe Val Ile Ile Val Ser Ile Pro Ala Asn
          20          25          30
Ile Gly Ser Leu Cys Val Ser Phe Leu Gln Ala Lys Lys Glu Ser Glu
          35          40          45
Leu Gly Ile Tyr Leu Phe Ser Leu Ser Leu Ser Asp Leu Leu Tyr Ala
          50          55          60
Leu Thr Leu Pro Leu Trp Ile Asp Tyr Thr Trp Asn Lys Asp Asn Trp
          65          70          75          80
Thr Phe Ser Pro Ala Leu Cys Lys Gly Ser Ala Phe Leu Met Tyr Met
          85          90          95
Asn Phe Tyr Ser Ser Thr Ala Phe Leu Thr Cys Ile Ala Val Asp Arg
          100          105          110
Tyr Leu Ala Val Val Tyr Pro Leu Lys Phe Phe Phe Leu Arg Thr Arg
          115          120          125
Arg Phe Ala Leu Met Val Ser Leu Ser Ile Trp Ile Leu Glu Thr Ile
          130          135          140
Phe Asn Ala Val Met Leu Trp Glu Asp Glu Thr Val Val Glu Tyr Cys
          145          150          155          160
Asp Ala Glu Lys Ser Asn Phe Thr Leu Cys Tyr Asp Lys Tyr Pro Leu
          165          170          175
Glu Lys Trp Gln Ile Asn Leu Asn Leu Phe Arg Thr Cys Thr Gly Tyr
          180          185          190
Ala Ile Pro Leu Val Thr Ile Leu Ile Cys Asn Arg Lys Val Tyr Gln
          195          200          205
Ala Val Arg His Asn Lys Ala Thr Glu Asn Lys Glu Lys Lys Arg Ile
          210          215          220

```

## Aren0054.ST25.txt

Lys Lys Leu Leu Val Ser Ile Thr Val Thr Phe Val Leu Cys Phe Thr  
 225 230 235 240  
 Pro Phe His Val Met Leu Leu Ile Arg Cys Ile Leu Glu His Ala Val  
 245 250 255  
 Asn Phe Glu Asp His Ser Asn Ser Gly Lys Arg Thr Tyr Thr Met Tyr  
 260 265 270  
 Arg Ile Thr Val Ala Leu Thr Ser Leu Asn Cys Val Ala Asp Pro Ile  
 275 280 285  
 Leu Tyr Cys Phe Val Thr Glu Thr Gly Arg Tyr Asp Met Trp Asn Ile  
 290 295 300  
 Leu Lys Phe Cys Thr Gly Arg Cys Asn Thr Ser Gln Arg Gln Arg Lys  
 305 310 315 320  
 Arg Ile Leu Ser Val Ser Thr Lys Asp Thr Met Glu Leu Glu Val Leu  
 325 330 335

Glu

<210> 135  
 <211> 999  
 <212> DNA  
 <213> Homo sapiens

<400> 135  
 atggtgaact ccacccaccg tgggatgcac acttctctgc acctctggaa ccgcagcagt 60  
 tacagactgc acagcaatgc cagtgagtcc cttggaaaag gctactctga tggaggggtgc 120  
 tacgagcaac tttttgtctc tcctgaggtg tttgtgactc tgggtgtcat cagcttggtg 180  
 gagaatatct tagtgattgt ggcaatagcc aagaacaaga atctgcatc acccatgtac 240  
 tttttcatct gcagcttggc tgtggctgat atgctggtga gcgtttcaaa tggatcagaa 300  
 accattatca tcaccctatt aaacagtaca gatacggatg cacagagttt cacagtgaat 360  
 attgataatg tcattgactc ggtgatctgt agctccttgc ttgcatccat ttgcagcctg 420  
 ctttcaattg cagtggacag gtactttact atcttctatg ctctccagta ccataacatt 480  
 atgacagtta agcgggttgg gatcagcata agttgtatct gggcagcttg cacggtttca 540  
 ggcattttgt tcatcattta ctcatagatg agtgctgtca tcatctgcct catcaccatg 600  
 ttcttcacca tgctggctct catggcttct ctctatgtcc acatgttct gatggccagg 660  
 cttcacatta agaggattgc tgtcctcccc ggcactggtg ccatccgcca aggtgccaat 720  
 atgaagggaa aaattacctt gaccatcctg attggcgtct ttgttgtctg ctgggcccc 780  
 ttcttctctc acttaatat ctacatctct tgtcctcaga atccatattg tgtgtgcttc 840  
 atgtctcact ttaacttgta tctcactatg atcatgtgta attcaatcat cgatcctctg 900  
 atttatgcac tccggagtca agaactgagg aaaaccttca aagagatcat ctgttgcctat 960  
 cccctgggag gcctttgtga cttgtctagc agatattaa 999

<210> 136  
 <211> 332  
 <212> PRT  
 <213> Homo sapiens

<400> 136

Met Val Asn Ser Thr His Arg Gly Met His Thr Ser Leu His Leu Trp  
 1 5 10 15

Asn Arg Ser Ser Tyr Arg Leu His Ser Asn Ala Ser Glu Ser Leu Gly  
 20 25 30

Lys Gly Tyr Ser Asp Gly Gly Cys Tyr Glu Gln Leu Phe Val Ser Pro  
 35 40 45

Glu Val Phe Val Thr Leu Gly Val Ile Ser Leu Leu Glu Asn Ile Leu  
 50 55 60

Val Ile Val Ala Ile Ala Lys Asn Lys Asn Leu His Ser Pro Met Tyr  
 65 70 75 80

Phe Phe Ile Cys Ser Leu Ala Val Ala Asp Met Leu Val Ser Val Ser  
 85 90 95

Asn Gly Ser Glu Thr Ile Ile Ile Thr Leu Leu Asn Ser Thr Asp Thr  
 100 105 110

Asp Ala Gln Ser Phe Thr Val Asn Ile Asp Asn Val Ile Asp Ser Val  
 115 120 125

Ile Cys Ser Ser Leu Leu Ala Ser Ile Cys Ser Leu Leu Ser Ile Ala  
 130 135 140

Val Asp Arg Tyr Phe Thr Ile Phe Tyr Ala Leu Gln Tyr His Asn Ile  
 145 150 155 160

Met Thr Val Lys Arg Val Gly Ile Ser Ile Ser Cys Ile Trp Ala Ala  
 165 170 175

Cys Thr Val Ser Gly Ile Leu Phe Ile Ile Tyr Ser Asp Ser Ser Ala  
 180 185 190

Val Ile Ile Cys Leu Ile Thr Met Phe Phe Thr Met Leu Ala Leu Met  
 195 200 205

Ala Ser Leu Tyr Val His Met Phe Leu Met Ala Arg Leu His Ile Lys  
 210 215 220

Arg Ile Ala Val Leu Pro Gly Thr Gly Ala Ile Arg Gln Gly Ala Asn  
 225 230 235 240

Met Lys Gly Lys Ile Thr Leu Thr Ile Leu Ile Gly Val Phe Val Val  
 245 250 255

Cys Trp Ala Pro Phe Phe Leu His Leu Ile Phe Tyr Ile Ser Cys Pro  
 260 265 270

Gln Asn Pro Tyr Cys Val Cys Phe Met Ser His Phe Asn Leu Tyr Leu  
 275 280 285

Ile Leu Ile Met Cys Asn Ser Ile Ile Asp Pro Leu Ile Tyr Ala Leu  
 290 295 300

Arg Ser Gln Glu Leu Arg Lys Thr Phe Lys Glu Ile Ile Cys Cys Tyr  
 305 310 315 320

Pro Leu Gly Gly Leu Cys Asp Leu Ser Ser Arg Tyr  
 325 330

<210> 137  
 <211> 33  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 137  
 gccaatatga agggaaaaat taccttgacc atc 33

<210> 138  
 <211> 31  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 138  
 ctccttcggt cctcctatcg ttgtcagaag t 31

<210> 139  
 <211> 1842  
 <212> DNA  
 <213> Homo sapiens

<400> 139  
 atggggccca ccttagcggt tcccacccc tatggctgta ttggctgtaa gctacccag 60  
 ccagaataacc caccggctct aatcatcttt atgttctgcg cgatggttat caccatcgtt 120  
 gtagacctaa tcggcaactc catggtcatt ttggctgtga cgaagaacaa gaagctccgg 180  
 aattctggca acatcttcgt ggtcagtctc tctgtggccg atatgctggg gccatctac 240  
 ccataccctt tgatgctgca tgccatgtcc attgggggct gggatctgag ccagttacag 300  
 tgccagatgg tcgggttcat cacagggtg agtgtggctg gctccatctt caacatcgtg 360  
 gcaatcgcta tcaaccgtta ctgctacatc tgccacagcc tccagtacga acggatcttc 420  
 agtgtgcgca atacctgcat ctacctggtc atcacctgga tcatgaccgt cctggctgtc 480  
 ctgcccacaa tgtacattgg caccatcgag tacgatcctc gcacctacac ctgcatcttc 540  
 aactatctga acaaccctgt ctactgtgt accatcgtct gcatccactt cgtcctccct 600  
 ctcctcatcg tgggtttctg ctacgtgagg atctggacca aagtgtggc ggcccgtgac 660  
 cctgcagggc agaactctga caaccaactt gctgaggttc gcaatcttct aaccatgttt 720  
 gtgatcttcc tcctctttgc agtgtgtggt tgccctatca acgtgtcac tgtcttggtg 780  
 gctgtcagtc cgaaggagat ggcaggcaag atccccaact ggctttatct tgcagcctac 840  
 ttcatagcct acttcaacag ctgcctcaac gctgtgatct acgggctcct caatgagaat 900



```

ttccgaagag aatactggac catcttccat gctatgcggc accctatcat attcttcct 960
ggcctcatca gtgatattcg tgagatgcag gaggcccgta ccctggcccg cgcccggtgcc 1020
catgctcgcg accaagctcg tgaacaagac cgtgcccatg cctgtcctgc tgtggaggaa 1080
accccgatga atgtccggaa tgttccatta cctggtgatg ctgcagctgg ccaccccgac 1140
cgtgcctctg gccaccctaa gcccattcc agatcctcct ctgcctatcg caaatctgcc 1200
tctaccacc acaagtctgt ctttagccac tccaaggctg cctctgggtca cctcaagcct 1260
gtctctggcc actccaagcc tgctctggt caccccaagt ctgccactgt ctaccctaag 1320
cctgcctctg tccatttcaa gggtgactct gtccatttca aggttgactc tgtccatttc 1380
aagcctgact ctgttcattt caagcctgct tccagcaacc ccaagcccat cactggccac 1440
catgtctctg ctggcagcca ctccaagtct gccttcagtg ctgccaccag ccaccctaaa 1500
cccatcaagc cagctaccag ccatgctgag cccaccactg ctgactatcc caagcctgcc 1560
actaccagcc accctaagcc cgtgctgct gacaaccctg agctctctgc ctccattgc 1620
cccagatcc ctgccattgc ccaccctgtg tctgacgaca gtgacctccc tgagtcggcc 1680
tctagccctg ccgctgggcc caccaagcct gctgccagcc agctggagtc tgacaccatc 1740
gctgaccttc ctgacctac tgtagtcact accagtacca atgattacca tgatgtcgtg 1800
gttggtgatg ttgaagatga tcctgatgaa atggctgtgt ga 1842

```

```

<210> 140
<211> 613
<212> PRT
<213> Homo sapiens
<400> 140

```

```

Met Gly Pro Thr Leu Ala Val Pro Thr Pro Tyr Gly Cys Ile Gly Cys
1          5          10          15
Lys Leu Pro Gln Pro Glu Tyr Pro Pro Ala Leu Ile Ile Phe Met Phe
20        25        30
Cys Ala Met Val Ile Thr Ile Val Val Asp Leu Ile Gly Asn Ser Met
35        40        45
Val Ile Leu Ala Val Thr Lys Asn Lys Lys Leu Arg Asn Ser Gly Asn
50        55        60
Ile Phe Val Val Ser Leu Ser Val Ala Asp Met Leu Val Ala Ile Tyr
65        70        75        80
Pro Tyr Pro Leu Met Leu His Ala Met Ser Ile Gly Gly Trp Asp Leu
85        90        95
Ser Gln Leu Gln Cys Gln Met Val Gly Phe Ile Thr Gly Leu Ser Val
100       105       110
Val Gly Ser Ile Phe Asn Ile Val Ala Ile Ala Ile Asn Arg Tyr Cys
115       120       125

```

Tyr Ile Cys His Ser Leu Gln Tyr Glu Arg Ile Phe Ser Val Arg Asn  
 130 135 140  
 Thr Cys Ile Tyr Leu Val Ile Thr Trp Ile Met Thr Val Leu Ala Val  
 145 150 155 160  
 Leu Pro Asn Met Tyr Ile Gly Thr Ile Glu Tyr Asp Pro Arg Thr Tyr  
 165 170 175  
 Thr Cys Ile Phe Asn Tyr Leu Asn Asn Pro Val Phe Thr Val Thr Ile  
 180 185 190  
 Val Cys Ile His Phe Val Leu Pro Leu Leu Ile Val Gly Phe Cys Tyr  
 195 200 205  
 Val Arg Ile Trp Thr Lys Val Leu Ala Ala Arg Asp Pro Ala Gly Gln  
 210 215 220  
 Asn Pro Asp Asn Gln Leu Ala Glu Val Arg Asn Phe Leu Thr Met Phe  
 225 230 235 240  
 Val Ile Phe Leu Leu Phe Ala Val Cys Trp Cys Pro Ile Asn Val Leu  
 245 250 255  
 Thr Val Leu Val Ala Val Ser Pro Lys Glu Met Ala Gly Lys Ile Pro  
 260 265 270  
 Asn Trp Leu Tyr Leu Ala Ala Tyr Phe Ile Ala Tyr Phe Asn Ser Cys  
 275 280 285  
 Leu Asn Ala Val Ile Tyr Gly Leu Leu Asn Glu Asn Phe Arg Arg Glu  
 290 295 300  
 Tyr Trp Thr Ile Phe His Ala Met Arg His Pro Ile Ile Phe Phe Pro  
 305 310 315 320  
 Gly Leu Ile Ser Asp Ile Arg Glu Met Gln Glu Ala Arg Thr Leu Ala  
 325 330 335  
 Arg Ala Arg Ala His Ala Arg Asp Gln Ala Arg Glu Gln Asp Arg Ala  
 340 345 350  
 His Ala Cys Pro Ala Val Glu Glu Thr Pro Met Asn Val Arg Asn Val  
 355 360 365  
 Pro Leu Pro Gly Asp Ala Ala Ala Gly His Pro Asp Arg Ala Ser Gly  
 370 375 380  
 His Pro Lys Pro His Ser Arg Ser Ser Ser Ala Tyr Arg Lys Ser Ala  
 385 390 395 400  
 Ser Thr His His Lys Ser Val Phe Ser His Ser Lys Ala Ala Ser Gly  
 405 410 415  
 His Leu Lys Pro Val Ser Gly His Ser Lys Pro Ala Ser Gly His Pro  
 420 425 430  
 Lys Ser Ala Thr Val Tyr Pro Lys Pro Ala Ser Val His Phe Lys Gly  
 435 440 445  
 Asp Ser Val His Phe Lys Gly Asp Ser Val His Phe Lys Pro Asp Ser  
 450 455 460  
 Val His Phe Lys Pro Ala Ser Ser Asn Pro Lys Pro Ile Thr Gly His  
 465 470 475 480

His Val Ser Ala Gly Ser His Ser Lys Ser Ala Phe Ser Ala Ala Thr  
 485 490 495

Ser His Pro Lys Pro Ile Lys Pro Ala Thr Ser His Ala Glu Pro Thr  
 500 505 510

Thr Ala Asp Tyr Pro Lys Pro Ala Thr Thr Ser His Pro Lys Pro Ala  
 515 520 525

Ala Ala Asp Asn Pro Glu Leu Ser Ala Ser His Cys Pro Glu Ile Pro  
 530 535 540

Ala Ile Ala His Pro Val Ser Asp Asp Ser Asp Leu Pro Glu Ser Ala  
 545 550 555 560

Ser Ser Pro Ala Ala Gly Pro Thr Lys Pro Ala Ala Ser Gln Leu Glu  
 565 570 575

Ser Asp Thr Ile Ala Asp Leu Pro Asp Pro Thr Val Val Thr Thr Ser  
 580 585 590

Thr Asn Asp Tyr His Asp Val Val Val Val Asp Val Glu Asp Asp Pro  
 595 600 605

Asp Glu Met Ala Val  
 610

<210> 141

<211> 1842

<212> DNA

<213> Homo sapiens

<400> 141

atggggccca ccctagcggg tcccaccccc tatggctgta ttggctgtaa gctaccccag 60

ccagaatacc caccggctct aatcatcttt atgttctgcg cgatgggttat caccatcggt 120

gtagacctaa tcggcaactc catggtcatt ttggctgtga cgaagaacaa gaagctccgg 180

aattctggca acatcttcgt ggtcagtcct tctgtggcgg atatgctggg ggccatctac 240

ccataccctt tgatgctgca tgccatgtcc attgggggct gggatctgag ccagttacag 300

tgccagatgg tcgggttcat cacagggctg agtgtggctg gctccatctt caacatcggt 360

gcaatcgcta tcaaccgtta ctgctacatc tgccacagcc tccagtacga acggatcttc 420

agtgtgcgca atacctgcat ctacctgggt atcacctgga tcatgaccgt cctggctgtc 480

ctgcccacaa tgtacattgg caccatcgag tacgatcctc gcacctacac ctgcatcttc 540

aactatctga acaaccctgt cttactgtt accatcgtct gcatccactt cgtcctccct 600

ctctcatcg tgggtttctg ctacgtgagg atctggacca aagtgtggc ggcccgtgac 660

cctgcagggc agaatcctga caaccaactt gctgagggtc gcaataaaact aaccatgttt 720

gtgatcttcc tcctctttgc agtgtgctgg tgccctatca acgtgctcac tgtcttggtg 780

gctgtcagtc cgaaggagat ggagggaag atccccaact ggctttatct tgcagcctac 840

ttcatagcct acttcaacag ctgcctcaac gctgtgatct acgggctcct caatgagaat 900

ttccgaagag aatactggac catcttccat gctatgcggc accctatcat attcttctct 960

```

ggcctcatca gtgatattcg tgagatgcag gaggcccgta cctgggcccg cgcccgtgcc 1020
catgctcgcg accaagctcg tgaacaagac cgtgcccattg cctgtcctgc tgtggaggaa 1080
accccgatga atgtccggaa tgttccatta cctgggtgatg ctgcagctgg ccaccccgac 1140
cgtgcctctg gccaccctaa gcccattcc agatcctcct ctgcctatcg caaatctgcc 1200
tctaccacc acaagtctgt ctttagccac tccaaggctg cctctggtca cctcaagcct 1260
gtctctggcc actccaagcc tgcctctggt caccccaagt ctgccactgt ctaccctaag 1320
cctgcctctg tccatttcaa ggctgactct gtccatttca agggtgactc tgtccatttc 1380
aagcctgact ctgttcattt caagcctgct tccagcaacc ccaagcccat cactggccac 1440
catgtctctg ctggcagcca ctccaagtct gccttcaatg ctgccaccag ccaccctaaa 1500
cccatcaagc cagctaccag ccattgctgag cccaccactg ctgactatcc caagcctgcc 1560
actaccagcc accctaagcc cgctgctgct gacaaccctg agctctctgc ctcccattgc 1620
cccgagatcc ctgccattgc ccaccctgtg tctgacgaca gtgacctccc tgagtgcggc 1680
tctagccctg ccgctggggc caccaagcct gctgccagcc agctggagtc tgacaccatc 1740
gctgaccttc ctgaccctac tgtagtcact accagtacca atgattacca tgatgtcgtg 1800
gttggtgatg ttgaagatga tctgatgaa atggctgtgt ga 1842

```

```

<210> 142
<211> 613
<212> PRT
<213> Homo sapiens

```

```
<400> 142
```

```

Met Gly Pro Thr Leu Ala Val Pro Thr Pro Tyr Gly Cys Ile Gly Cys
1          5          10          15
Lys Leu Pro Gln Pro Glu Tyr Pro Pro Ala Leu Ile Ile Phe Met Phe
          20          25          30
Cys Ala Met Val Ile Thr Ile Val Val Asp Leu Ile Gly Asn Ser Met
          35          40          45
Val Ile Leu Ala Val Thr Lys Asn Lys Lys Leu Arg Asn Ser Gly Asn
          50          55          60
Ile Phe Val Val Ser Leu Ser Val Ala Asp Met Leu Val Ala Ile Tyr
          65          70          75          80
Pro Tyr Pro Leu Met Leu His Ala Met Ser Ile Gly Gly Trp Asp Leu
          85          90          95
Ser Gln Leu Gln Cys Gln Met Val Gly Phe Ile Thr Gly Leu Ser Val
          100          105          110
Val Gly Ser Ile Phe Asn Ile Val Ala Ile Ala Ile Asn Arg Tyr Cys
          115          120          125
Tyr Ile Cys His Ser Leu Gln Tyr Glu Arg Ile Phe Ser Val Arg Asn
          130          135          140

```

Thr Cys Ile Tyr Leu Val Ile Thr Trp Ile Met Thr Val Leu Ala Val  
 145 150 155 160  
 Leu Pro Asn Met Tyr Ile Gly Thr Ile Glu Tyr Asp Pro Arg Thr Tyr  
 165 170 175  
 Thr Cys Ile Phe Asn Tyr Leu Asn Asn Pro Val Phe Thr Val Thr Ile  
 180 185 190  
 Val Cys Ile His Phe Val Leu Pro Leu Leu Ile Val Gly Phe Cys Tyr  
 195 200 205  
 Val Arg Ile Trp Thr Lys Val Leu Ala Ala Arg Asp Pro Ala Gly Gln  
 210 215 220  
 Asn Pro Asp Asn Gln Leu Ala Glu Val Arg Asn Lys Leu Thr Met Phe  
 225 230 235 240  
 Val Ile Phe Leu Leu Phe Ala Val Cys Trp Cys Pro Ile Asn Val Leu  
 245 250 255  
 Thr Val Leu Val Ala Val Ser Pro Lys Glu Met Ala Gly Lys Ile Pro  
 260 265 270  
 Asn Trp Leu Tyr Leu Ala Ala Tyr Phe Ile Ala Tyr Phe Asn Ser Cys  
 275 280 285  
 Leu Asn Ala Val Ile Tyr Gly Leu Leu Asn Glu Asn Phe Arg Arg Glu  
 290 295 300  
 Tyr Trp Thr Ile Phe His Ala Met Arg His Pro Ile Ile Phe Phe Ser  
 305 310 315 320  
 Gly Leu Ile Ser Asp Ile Arg Glu Met Gln Glu Ala Arg Thr Leu Ala  
 325 330 335  
 Arg Ala Arg Ala His Ala Arg Asp Gln Ala Arg Glu Gln Asp Arg Ala  
 340 345 350  
 His Ala Cys Pro Ala Val Glu Glu Thr Pro Met Asn Val Arg Asn Val  
 355 360 365  
 Pro Leu Pro Gly Asp Ala Ala Ala Gly His Pro Asp Arg Ala Ser Gly  
 370 375 380  
 His Pro Lys Pro His Ser Arg Ser Ser Ser Ala Tyr Arg Lys Ser Ala  
 385 390 395 400  
 Ser Thr His His Lys Ser Val Phe Ser His Ser Lys Ala Ala Ser Gly  
 405 410 415  
 His Leu Lys Pro Val Ser Gly His Ser Lys Pro Ala Ser Gly His Pro  
 420 425 430  
 Lys Ser Ala Thr Val Tyr Pro Lys Pro Ala Ser Val His Phe Lys Ala  
 435 440 445  
 Asp Ser Val His Phe Lys Gly Asp Ser Val His Phe Lys Pro Asp Ser  
 450 455 460  
 Val His Phe Lys Pro Ala Ser Ser Asn Pro Lys Pro Ile Thr Gly His  
 465 470 475 480  
 His Val Ser Ala Gly Ser His Ser Lys Ser Ala Phe Asn Ala Ala Thr

485

490

495

Ser His Pro Lys Pro Ile Lys Pro Ala Thr Ser His Ala Glu Pro Thr  
                   500                  505                  510

Thr Ala Asp Tyr Pro Lys Pro Ala Thr Thr Ser His Pro Lys Pro Ala  
                   515                  520                  525

Ala Ala Asp Asn Pro Glu Leu Ser Ala Ser His Cys Pro Glu Ile Pro  
                   530                  535                  540

Ala Ile Ala His Pro Val Ser Asp Asp Ser Asp Leu Pro Glu Ser Ala  
                   545                  550                  555                  560

Ser Ser Pro Ala Ala Gly Pro Thr Lys Pro Ala Ala Ser Gln Leu Glu  
                   565                  570                  575

Ser Asp Thr Ile Ala Asp Leu Pro Asp Pro Thr Val Val Thr Thr Ser  
                   580                  585                  590

Thr Asn Asp Tyr His Asp Val Val Val Val Asp Val Glu Asp Asp Pro  
                   595                  600                  605

Asp Glu Met Ala Val  
                   610

<210> 143  
 <211> 33  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 143  
 gctgaggttc gcaataaact aaccatgttt gtg

33

<210> 144  
 <211> 31  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 144  
 ctccttcggt ctcctatcg ttgtcagaag t

31

<210> 145  
 <211> 27  
 <212> DNA  
 <213> Artificial

<220>  
 <223> Novel Sequence

<400> 145  
 ttagatatcg gggcccaccc tagcggg

27

<210> 146  
 <211> 29  
 <212> DNA

<213> Artificial

<220>

<223> Novel Sequence

<400> 146

ggtacccccca cagccatttc atcaggatc

29